Issued May 4, 1909.

U. S. DEPARTMENT OF AGRICULTURE.

Report No. 88.

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ON THE NUTRITION AND HEALTH OF MAN.

AN EXPERIMENTAL STUDY OF THE INFLUENCE OF SODIUM BENZOATE ON THE NUTRITION AND HEALTH OF MAN. By Russell H. Chittenden.

INVESTIGATIONS ON THE EFFECT OF SODIUM BENZOATE ON THE HEALTH AND GENERAL METABOLISM OF MAN. By John H. Long.

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LETTER OF SUBMITTAL.

U. S. Department of Agriculture,
Office of Consulting Scientific Experts,
Baltimore, January 23, 1909.

Sir: I have the honor to submit herewith a report of the investigations carried out under the direction of this board on the action of sodium benzoate upon the nutrition and health of man.

Respectfully,

Ira Remsen, *Chairman,*
Referee Board of Consulting Scientific Experts.

Hon. James Wilson,
Secretary of Agriculture.

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THE INFLUENCE OF SODIUM BENZOATE ON THE NUTRITION AND HEALTH OF MAN.

REPORT OF THE REFEREE BOARD OF CONSULTING SCIENTIFIC EXPERTS.

Of the questions referred to this board[a] the first to engage our attention have been the following:

(1) "Does a food to which there has been added benzoic acid, or any of its salts, contain any added poisonous or other added deleterious ingredient which may render the said food injurious to health? (*a*) In large quantities? (*b*) In small quantities?"

(2) "If benzoic acid or any of its salts be mixed or packed with a food, is the quality or strength of said food thereby reduced, lowered, or injuriously affected? (*a*) In large quantities? (*b*) In small quantities?"

To obtain satisfactory answers to these questions, the board has felt it necessary to carry through a careful investigation of the effect of benzoic acid or some one of its salts on the nutrition and general health of man. A thorough study of the literature giving the results of work done by various investigators on the physiological effects of benzoic acid and its salts, together with a study of reported clinical and medical observations, therapeutic usage, etc., have made it apparent that additional work was needed to render possible a conclusive answer to the above questions.

With a view to limiting the scope of the work, while at the same time meeting all practical requirements, our investigation, with the consent of the Secretary of Agriculture, has been confined to a study of the effect of the sodium salt of benzoic acid, viz, sodium benzoate.

To make this experimental inquiry as thorough as possible and to minimize the personal equation, three independent investigations

[a] Dr. Alonzo E. Taylor, professor in the University of California, a member of this board, owing to absence in Europe, has not been able to participate in the investigations embodied in this report.

have been carried out; one at the Medical School of Northwestern University in Chicago, under the charge of Prof. John H. Long, of that institution; a second at the private laboratory of Prof. Christian A. Herter, of Columbia University, New York City; and the third at the Sheffield Scientific School of Yale University, in charge of Prof. Russell H. Chittenden.

The same general plan of procedure was followed in all three experiments. A certain number of healthy young men were selected as subjects, and during a period of four months these men, under definite conditions of diet, etc., with and without sodium benzoate, were subjected to thorough clinical and medical observation, while the daily food and the excretions were carefully analyzed, and otherwise studied, and comparison made of the clinical, chemical, bacteriological, and other data collected. (For details see the individual reports.) In this manner material has been brought together which makes possible conclusions regarding the effect of small and large doses of sodium benzoate upon the human system.

In fixing upon the amount of sodium benzoate that should constitute a "small dose" we have adopted 0.3 gram of the salt per day. Manufacturers of food products which in their view require the use of a preservative are in general content with 0.1 per cent of sodium benzoate. This would mean that in the eating of such a preserved food the consumer would need to take 300 grams per day, or nearly two-thirds of a pound, of preserved food to ingest an amount of benzoate equal to our minimal daily dosage. Looked at from this point of view, our dosage of 0.3 gram per day seemed a fair amount for a "small dose," one that would clearly suffice to show any effect that small doses of the salt might exert, especially if continued for a considerable length of time. In all these three experiments this daily dosage was continued for a period of about two months. Under "large dose" was included quantities of sodium benzoate ranging from 0.6 gram to 4 grams per day. Such a daily dosage was continued for a period of one month. In a few instances somewhat larger doses were employed.

As the amount and character of the daily diet exert a well-known influence upon many of the metabolic or nutritive changes of the body, as well as upon the bacterial flora of the intestines, attention is called to the fact that the three investigations differed from each other in the amount of protein food consumed daily, thereby intro-

ducing a distinctive feature which tends to broaden the conditions under which the experiments were conducted.

The conclusions reached as a result of the individual investigations are given at length in the separate reports herewith presented, together with all of the data upon which these conclusions are based.

The fact should be emphasized that the results obtained from the three separate investigations are in close agreement in all essential features.

The main general conclusions reached by the referee board are as follows:

(1) Sodium benzoate in small doses (under 0.5 gram per day) mixed with the food is without deleterious or poisonous action and is not injurious to health.

(2) Sodium benzoate in large doses (up to 4 grams per day) mixed with the food has not been found to exert any deleterious effect on the general health, nor to act as a poison in the general acceptation of the term. In some directions there were slight modifications in certain physiological processes, the exact significance of which modifications is not known.

(3) The admixture of sodium benzoate with food in small or large doses has not been found to injuriously affect or impair the quality or nutritive value of such food.

IRA REMSEN, *Chairman*,
RUSSELL H. CHITTENDEN,
JOHN H. LONG,
CHRISTIAN A. HERTER,
Referee Board of Consulting Scientific Experts.

AN EXPERIMENTAL STUDY OF THE INFLUENCE OF SODIUM BENZOATE ON THE NUTRITION AND HEALTH OF MAN.

By RUSSELL H. CHITTENDEN.

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AN EXPERIMENTAL STUDY OF THE INFLUENCE OF SODIUM BENZOATE ON THE NUTRITION AND HEALTH OF MAN.

By Russell H. Chittenden.

INTRODUCTORY.

In an attempt to answer the questions, "Does a food to which there has been added benzoic acid, or any of its salts, contain any added poisonous or other added deleterious ingredient which may render the said food injurious to health; in large quantities; in small quantities?" the following experimental work has been performed, with results which seemingly afford positive answers to the above questions.

With a view to limiting the scope of the work, while at the same time meeting all practical requirements, and with the consent of the Secretary of Agriculture, our investigation has been confined to a study of the sodium salt of benzoic acid, viz, sodium benzoate.

The work has been carried on in the laboratories of the Sheffield Scientific School of Yale University under the personal supervision of the writer. The chemical work was under the special charge of Frank P. Underhill, Ph. D., assistant professor of physiological chemistry in the Sheffield Scientific School, with a suitable corps of trained chemists and assistants. The bacteriological work was in charge of Leo F. Rettger, Ph. D., assistant professor of bacteriology and hygiene in the Sheffield Scientific School, while the necessary medical and clinical examinations were made by Richard F. Rand, M. D., clinical assistant at the Yale Medical School.

The subjects—six in number—on whom the effects of sodium benzoate were to be studied were carefully selected with a view to obtaining different types of physical and mental make-up, as well as persons of well-known character and responsibility. All of the subjects chosen were graduate students in the university, thoroughly trained in chemistry and physiology, so that they were able to serve not only as subjects in the experiment, but likewise as analysts, capable of assisting in the gathering of the data. All were known to the writer for several years.

The experiment was commenced the 1st of July and extended to the 8th of November. During this period of four months the subjects were fed at a private table provided nearby the laboratory.

where complete supervision could be had of the amount and character of the food taken, with all facilities for weighing the food consumed by each subject, preparation of suitable samples of the various foods for chemical analysis, etc.

PLAN OF THE EXPERIMENT.

For a week prior to the actual commencement of the experiment the subjects were required to take their meals at the table provided; the urine and feces were collected daily; partial analyses made, sufficient to indicate the general extent of their body metabolism; the amount of food consumed daily by each individual noted; clinical and medical examinations made, etc., with the purpose of obtaining a general view of the physiological characteristics or personal peculiarities of the individual subjects.

The experiment proper was divided into a fore period of 2 weeks or 14 days, i. e., from July 6 to July 19, inclusive, in which complete daily records were made of the subjects under normal conditions of life and diet. This was followed by a benzoate period of 2 months, from July 20 to September 20, inclusive, in which each subject was fed with his food daily 0.3 gram of sodium benzoate. This constituted the "small dose," and being continued over a period of 62 days would seemingly provide ample opportunity for the detection of any effects which small doses of sodium benzoate might produce. In this connection it is to be noted that during this period of 2 months each subject took 18.6 grams of sodium benzoate. Next followed an "after period" of 10 days, from September 21 to September 30, inclusive, in which no benzoate was given, thus affording another so-called normal period for comparison. For the next 4 weeks, commencing with October 1, larger doses of sodium benzoate were given as follows: During the first week, from October 1 to October 7, inclusive, the daily dose was 0.6 gram; for the week October 8 to 14, inclusive, the dose was increased to 1 gram daily; from October 15 to 21, inclusive, 2 grams of sodium benzoate were taken daily by each subject; on October 22 the dosage of benzoate was increased to 4 grams per day, at which level it was continued for the following 7 days. During this period of "large doses" of sodium benzoate, covering 28 days, each subject took a total of 53.2 grams of benzoate. Finally, there was another "after period" of 10 days—from October 29 to November 7, inclusive—in which no benzoate was given. All through the period of 125 days covered by the experiment, accurate data were collected of food consumption, food composition, urine excretion, fecal discharges, for each subject, together with chemical composition of the daily excretions, etc., reinforced by the clinical and medical examinations, bacteriological examinations of feces, blood count, etc. In this way competent comparison of the condition or conditions produced by small and

large doses of sodium benzoate, with the normal condition of the same subjects, might be expected, and thus light be thrown upon the effects of sodium benzoate on healthy individuals.

ADMINISTRATION OF THE SODIUM BENZOATE.[a]

In the administration of the benzoate an attempt was made to imitate the manner in which the salt would be taken if used in food as a preservative. With the smaller dose of 0.3 gram per day, the salt was dissolved in a given amount of water and then added to some one food so that the latter would contain one-tenth of 1 per cent of sodium benzoate. The salt was given three times a day—0.1 gram of benzoate with each meal—and in some one article of food, where it would be present to the extent of about one-tenth of 1 per cent by weight of that food. In this way was avoided any possible local effect of a relatively large single dose, as might perhaps happen if administered by capsule. Further, this method of administration insured entrance into the stomach of essentially the same percentage of benzoate, even when the dosage was increased to 0.6 gram per day. With larger doses of sodium benzoate the same general method of procedure was followed, though with a daily dosage of 2 grams and over the amount of benzoate in the food rose necessarily above 0.1 per cent.

A word of explanation may be offered here regarding the size of the "small dose" of sodium benzoate employed in our experiment. In adopting 0.3 gram of the salt as the daily dose we were influenced by the bearing of our problem upon the practical question of the use of sodium benzoate as a food preservative. Manufacturers of food products requiring the use of a preservative are apparently content with an allowance of 0.1 per cent of sodium benzoate. The consumer of such a product would need to take 300 grams—nearly two-thirds of a pound—of such a preserved food per day to ingest an amount of sodium benzoate equal to our minimal daily dosage. In other words, looked at from this standpoint, our dosage of 0.3 gram per day seemed a fair amount for a "small dose," one that would clearly suffice to show any effect that small doses of the salt might exert, especially if continued for a reasonable length of time.

In this connection it is interesting to note the relationship between the ingested sodium benzoate and the total food consumption of our different subjects per day during the several benzoate periods. The following table, giving the total amount of food consumed per day, together with the dosage of benzoate, shows the percentage of benzoate in the total day's food of the six subjects. From these

[a] The sodium benzoate employed was "soda benzoate," U. S. P., 99 per cent. It contained a trace of calcium and 2.2 per cent of water. In giving the salt, allowance was made for 99 per cent pure and the contained water, so that the daily doses specified represent actual sodium benzoate.

figures it is seen that with a daily dose of 0.3 gram of benzoate, the percentage of the salt in the total food consumed varied from 0.015 to 0.022 per cent. With a dosage of 0.6 gram per day the proportion of benzoate in the day's food varied from 0.032 per cent to 0.04 per cent. When 1 gram of sodium benzoate was taken daily the proportion of salt to the total food consumption varied from 0.055 per cent to 0.069 per cent. With a dosage of 2 grams per day, the total food consumed showed 0.108 to 0.13 per cent of sodium benzoate; while with a daily dose of 4 grams the proportion of benzoate to the total food consumption per day varied from 0.25 per cent to 0.31 per cent.

Percentages of sodium benzoate in the total day's food.

Date.	Sodium benzoate administered per day.	H. H. G.		W. W. H.		L. M. L.		J. F. L.		E. C. M.		W. C. R.	
		Weight of food per day.	Sodium benzoate in food.	Weight of food per day.	Sodium benzoate in food.	Weight of food per day.	Sodium benzoate in food.	Weight of food per day.	Sodium benzoate in food.	Weight of food per day.	Sodium benzoate in food	Weight of food per day.	Sodium benzoate in food.
	Gms.	*Gms.*	*P. ct.*	*Gms.*	*P. ct.*	*Gms.*	*P. ct.*	*Gms.*	*P. ct.*	*Gms.*	*P. ct.*	*Gms.*	*P. ct.*
July 20	0.3	1,880	......	1,787	......	1,900	......	1,834	......	2,080	......	1,392	......
July 21	.3	1,804	......	1,678	......	1,370	......	2,136	......	1,965	......	1,215	......
July 22	.3	1,578	......	1,644	......	1,883	......	1,839	......	1,734	......	1,274	......
July 23	.3	1,936	......	1,951	......	1,763	......	2,025	......	2,120	......	1,300	......
July 24	.3	1,525	......	1,569	......	2,077	......	2,050	......	1,893	......	1,320	......
July 25	.3	1,648	......	1,861	......	2,030	......	1,908	......	1,937	......	1,402	......
July 26	.3	1,613	......	1,751	......	1,813	......	1,648	......	1,770	......	1,263	......
Average	.3	1,712	0.017	1,748	0.017	1,833	0.016	1,920	0.015	1,927	0.015	1,309	0.022
Oct. 1	.6	1,112	......	1,855	......	1,755	......	1,571	......	1,638	......	1,095	......
Oct. 2	.6	1,477	......	1,699	......	1,696	......	1,692	......	1,569	......	1,392	......
Oct. 3	.6	1,641	......	1,635	......	1,748	......	1,656	......	1,744	......	1,433	......
Oct. 4	.6	1,652	......	1,950	......	2,028	......	1,813	......	1,559	......	1,895	......
Oct. 5	.6	1,582	......	1,538	......	1,926	......	1,573	......	1,734	......	1,466	......
Oct. 6	.6	1,499	......	1,509	......	1,634	......	1,452	......	1,406	......	1,409	......
Oct. 7	.6	1,685	......	1,783	......	2,006	......	1,906	......	1,579	......	1,675	......
Average	.6	1,521	.039	1,709	.035	1,827	.032	1,666	.036	1,604	.037	1,481	.040
Oct. 8	1.0	1,712	......	1,726	......	1,899	......	1,626	......	1,492	......	1,555	......
Oct. 9	1.0	1,557	......	1,807	......	1,790	......	1,552	......	1,585	......	1,376	......
Oct. 10	1.0	1,827	......	1,749	......	1,892	......	1,736	......	1,905	......	1,599	......
Oct. 11	1.0	1,890	......	1,903	......	1,939	......	1,768	......	1,800	......	1,472	......
Oct. 12	1.0	1,415	......	1,867	......	1,774	......	1,481	......	1,411	......	1,318	......
Oct. 13	1.0	1,627	......	1,838	......	1,778	......	1,797	......	1,680	......	1,280	......
Oct. 14	1.0	1,306	......	1,604	......	1,564	......	1,654	......	1,620	......	1,537	......
Average	1.0	1,619	.061	1,785	.056	1,805	.055	1,659	.060	1,642	.060	1,448	.069
Oct. 15	2.0	1,572	......	1,810	......	1,768	......	1,863	......	1,518	......	1,682	......
Oct. 16	2.0	1,386	......	2,013	......	1,944	......	1,818	......	1,594	......	1,332	......
Oct. 17	2.0	1,583	......	1,724	......	1,757	......	1,371	......	1,356	......	1,535	......
Oct. 18	2.0	1,363	......	1,932	......	1,903	......	1,911	......	1,639	......	1,610	......
Oct. 19	2.0	1,178	......	1,584	......	1,824	......	1,593	......	1,373	......	1,421	......
Oct. 20	2.0	1,514	......	1,740	......	1,898	......	1,962	......	1,969	......	1,597	......
Oct. 21	2.0	1,518	......	1,807	......	1,892	......	1,510	......	1,462	......	1,463	......
Average	2.0	1,445	.130	1,801	.110	1,855	.108	1,718	.110	1,559	.120	1,520	.130
Oct. 22	4.0	1,224	......	1,529	......	1,677	......	1,544	......	1,556	......	1,471	......
Oct. 23	4.0	1,247	......	1,431	......	1,237	......	1,249	......	1,320	......	1,186	......
Oct. 24	4.0	1,330	......	1,457	......	1,591	......	1,349	......	1,245	......	1,165	......
Oct. 25	4.0	1,343	......	1,482	......	1,505	......	1,452	......	1,503	......	1,272	......
Oct. 26	4.0	1,426	......	1,543	......	1,531	......	1,463	......	1,467	......	1,123	......
Oct. 27	4.0	1,437	......	1,834	......	1,788	......	1,648	......	1,704	......	1,324	......
Oct. 28	4.0	1,480	......	1,804	......	1,769	......	1,716	......	1,649	......	1,333	......
Average	4.0	1,355	.290	1,583	.250	1,585	.250	1,489	.260	1,492	.260	1,268	.310

CHARACTER OF THE DAILY DIET.

In any study of nutritive changes, especially such as extend over long periods of time, the character and amount of the daily diet are important factors. In our experiment two facts are to be emphasized. First, the subjects were not restricted to a limited dietary, but on the contrary were allowed reasonable freedom of choice, both as to character and quantity of the daily food. In other words, there was no interference with the normal desires of the individual, but each subject was allowed full latitude in the exercise of his personal likes and dislikes. To be sure, each day a definite menu was arranged for all three meals, but this was sufficiently generous in character to admit of choice; further, after a short time sufficient knowledge was acquired of the special tastes of the subjects, so that a daily dietary could easily be provided quite satisfactory to all. By this method of procedure there was no violation of that physiological good sense so essential in experiments of this character. Second, after the first few weeks the subjects, consciously or unconsciously, settled down to a relatively low protein diet, which was maintained throughout the experiment. This is a point to be emphasized, since as protein metabolism is influenced largely by the intake of protein food we had in our experiment a definite condition; one which afforded an opportunity for the study of the effect of sodium benzoate upon subjects living under a relatively low protein intake and consequently at a somewhat lower level of nitrogen metabolism than is ordinarily maintained by the majority of mankind. The following table shows the average daily intake of nitrogen for each subject during the five periods of the experiment:

Daily average intake of nitrogen.

Date.	H. H. G.	W.W.H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 19	13.78	13.50	15.28	13.71	14.02	11.56
July 20 to September 20	11.64	11.52	12.65	13.12	12.77	11.08
September 21 to 30	11.14	11.32	12.39	12.63	12.28	11.18
October 1 to 28	11.08	11.94	12.69	11.90	12.13	11.37
October 29 to November 7	11.82	11.41	13.23	13.08	12.88	11.29

The results are certainly suggestive as showing how individuals tend to maintain within reasonable limits a definite average nitrogen intake, even though entirely unhampered by restrictions as to quality of food or quantity. The larger intake of nitrogen during the first period of 2 weeks, noticeable in 4 of the subjects particularly, was due without doubt to the stimulating effect of the change to the new table. Both the menu and the cooking of the experimental table were excellent, and a general change of living such as was involved

here might well serve as a temporary stimulus to appetite. (For details regarding the daily food of the several subjects and the content of nitrogen in the same, see appended tables of food composition, p. 221.)

While the nitrogen intake of our subjects was relatively low, the fuel value of the daily food was not essentially different from the values usually seen. In other words, the daily intake of fats and carbohydrates was such that the heat-giving power of the food averaged about 3,000 large calories per day. While these data are not based wholly upon accurate chemical analysis, as in the determination of the nitrogen of the food, they are sufficiently near the truth to have value in showing the general character of the daily dietary as looked at from the standpoint of energy-yielding power. The following table gives a sufficient number of data to indicate the average values for each subject:

Estimated fuel value of the daily food.

Date.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Calories.	*Calories.*	*Calories.*	*Calories.*	*Calories.*	*Calories.*
July 27	2,848	3,454	3,585	3,241	2,079	2,973
July 28	2,424	2,949	3,028	3,677	1,964	2,184
July 29	3,113	3,408	3,250	4,182	2,885	2,619
July 30	3,566	4,081	4,638	4,135	4,018	2,896
July 31	3,203	2,706	3,695	4,365	3,830	3,200
August 1	3,133	3,345	3,890	4,179	3,969	3,000
August 2	2,869	3,564	3,360	3,186	2,700	1,655
Average	3,022	3,358	3,635	3,852	3,063	2,647
October 8	3,040	3,139	4,112	2,954	2,943	2,996
October 9	3,192	3,920	4,038	3,055	3,431	3,272
October 10	3,551	3,526	4,093	3,266	3,584	3,137
October 11	2,958	3,064	3,166	2,423	2,914	2,633
October 12	2,530	3,235	3,652	2,682	2,854	2,550
October 13	2,758	3,229	3,417	3,370	3,190	2,388
October 14	2,562	3,258	3,473	3,497	3,593	3,076
Average	2,942	3,339	3,707	3,035	3,216	2,865

CLINICAL OBSERVATIONS.

SUBJECT No. 1—H. H. G.

This subject was a young man, 24 years of age, an assistant in the chemical laboratory. At the initial examination, made by the medical inspector July 2, 1908, he was described as of slender build, weighing 50.8 kilograms; skin pale; mucous membranes of fair color; "adenoid face" (mouth breather) with high palatal arch. His chest was long, narrow, and flat. Lungs were normal, breath sounds and resonance being of normal character; complete absence of râles or dullness. The heart sounds were clear; the point of maximum impulse was visible in the fifth interspace inside of the nipple line. The abdomen was flat, with normal respiratory movements, soft on palpation, no mass felt. The spleen and kidneys were not palpable. Liver dullness was normal. Knee jerk weak. Body temperature

was 98.6°. Pulse, 78 beats per minute and quite regular, with fair volume and tension. The urine was of a pale yellow color, slightly cloudy. The small sediment which eventually separated was composed of amorphous phosphate. The reaction of the urine was acid. Specific gravity, 1.016. The urine was free from albumin, sugar, and bile. Careful microscopic examination of the slight sediment showed an absence of tubular casts, cells, etc. The only noticeable component of the sediment was the amorphous phosphate already referred to, with a few crystals of dicalcium phosphate and a few mucous threads.

On July 14 the subject had a "cold." There was slight follicular tonsilitis and pharyngitis. His temperature was 99°; pulse, 88. An antiseptic gargle was prescribed and calomel given. In three days the patient was quite well.

On July 29 clinical examination showed the heart, lungs, and abdomen normal. General condition wholly unchanged. Subject stated that he felt well. Body temperature was 98°. Pulse beat 66 per minute. The urine had a specific gravity of 1.018; was very faintly acid in reaction; pale yellow in color, and showed a slight white precipitate of amorphous phosphate. There were no casts, cells, or other substances of pathological significance. Tests of the urine made for albumin, sugar, etc., were wholly negative.

On August 4 the subject was treated for laceration of hand caused by the breaking of glass apparatus in the laboratory. There were two punctured wounds over lower and second metacarpal at the base of the index finger. There was loss of sensation along the outer side of finger. The wounds were dressed on August 4, 6, 8, and 12. On the latter date the wounds had healed per primary; loss of sensation still persisted. It was thought advisable to wait and see if sensation would return before doing exploratory operation for nerve suture, as the subject was anxious to keep on with his work.

On September 1 clinical examination showed no deviation from the normal.

On September 24, near the close of the first benzoate period, another examination showed body temperature 98.8°; pulse, 82 beats per minute; regular, with fair volume and tension. The urine was free from any casts or cells. A few mucous threads were observed, and a few crystals of calcium oxalate with some amorphous phosphate. The heart, lungs, and abdomen were normal. The general condition of the subject was good. He was gaining in weight and felt quite well.

On October 14, after a week of taking 1 gram of sodium benzoate per day, the body temperature was found to be 98°; pulse, 70 beats per minute; regular, with good volume and tension. The heart, lungs, and abdomen were normal; general condition excellent. Subject stated that he felt very well. The urine was entirely normal.

On October 22, at the close of the week when 2 grams of sodium benzoate had been taken daily, the same general condition of good health prevailed, with no deviation from the normal.

On October 28, at the close of the week when 4 grams of sodium benzoate had been taken daily, the body temperature was found to be 98.2°; pulse, 74 beats per minute; regular, and with good volume and tension. The heart, lungs, and abdomen were normal. General condition was good, the subject stating that he felt well, with continued gain in body weight. The urine was perfectly normal, free from casts or any other abnormality.

On November 7, at the close of the final after period, clinical examination showed body temperature 98°; pulse, 76 beats per minute; with good volume and tension. The heart, lungs, abdomen, liver, and spleen were normal. No changes in the physical condition of the subject could be observed during the course of the test. Subject stated that he felt well and had noticed no change in his health one way or the other during the period of the experiment. He had gained 6 to 7 pounds in body weight. The urine was normal and free from sediment, except a few mucous threads. Careful questioning of the subject with regard to his impressions as to possible action on the part of the sodium benzoate led to negative statements, with the exception that during the larger dosage of sodium benzoate he thought the bad taste of the salt objectionable.

SUBJECT No. 2—W. W. H.

This subject was a young man, 24 years of age, with a body weight of 51.6 kilograms. He was small and slight. The first clinical examination, made July 6, showed the following: Skin and mucous membranes of good color; partial mouth breather, nasal obstruction due to septal deformity. The chest was fairly well formed; rather long, flat, and narrow. Lungs were normal; breath sounds and resonance normal. The heart sounds were clear; the point of maximum impulse was visible in the sixth interspace inside of the nipple line. The abdomen was full, soft, normal tympany, no mass. Spleen and kidneys were not palpable. Liver in normal position. Body temperature, 98.4°. Pulse, 70 beats per minute; regular, with good volume and tension. The urine was pale yellow in color, slightly cloudy; acid reaction; specific gravity 1.016. The slight sediment in the urine was composed of amorphous phosphate. No casts; no cells. Tests for albumin, sugar, bile, etc., were wholly negative. On July 29 the heart, lungs, and abdomen were found normal. General physical condition of the subject was good. Body temperature was 98°; pulse, 69 beats per minute.

On August 5 the subject had a sore throat; coryza, pharyngitis, and a few "spots" on the left tonsil. Necessary treatment was given.

Body temperature was 101.2°; pulse, 87 beats per minute. On August 7 his throat was practically normal. August 24 there was a slight recurrence of sore throat. The pharyngitis, however, was very slight and quickly alleviated by an antiseptic gargle.

September 5 the general condition was good; no deviation from the normal in body temperature, pulse rate, or in the character of the urine.

September 25 the body temperature was 98.2°; pulse beat, 74; regular, with fair volume and tension. The heart, lungs, and abdomen were normal. General physical condition good, with some increase in body weight. The urine had a specific gravity of 1.018, and was free from albumin, sugar, or any abnormal substance. Microscopic examination of the slight sediment showed a few mucous threads and crystals of calcium oxalate. No casts were to be found.

October 13 the body weight still showed increase. The heart, lungs, and abdomen were normal. General physical condition was good, the subject stating that he felt perfectly well. Body temperature was 98°; pulse, 78; regular, with good volume and tension.

On October 20, when the subject was taking 2 grams of sodium benzoate per day, examination showed the same good physical condition, with complete absence of any signs of abnormality in the urine.

October 27, near the close of the largest benzoate dosage, clinical examination showed the heart and lungs normal; abdomen full and soft; rather more gas in the intestines than in previous examinations. Subject stated that he had had slight gastro-intestinal fermentation for two days. Subject stated that he felt well and his general physical condition was plainly good. His body weight was increased. Body temperature was 98°; pulse, 78 beats per minute; regular, with good volume and tension. The urine was yellow in color; specific gravity, 1.020; acid in reaction and free from albumin, sugar, etc. A slight cloudy precipitate appeared in the urine on standing. Microscopic examination of this sediment showed a small amount of amorphous phosphate and a few crystals of calcium oxalate. Long search revealed two finely granular casts. There were no cells.

On November 5, near the close of the experiment, final clinical examination showed the heart, lungs, and abdomen normal. Body temperature was 99°; pulse, 78 beats per minute; regular, with good volume and tension. No change was observed in the physical condition of the subject during the entire course of the experiment, with the slight exception noted above. The subject himself stated that he felt as well as at the beginning of the period and that he had seen no ill effects from the test so far as subjective symptoms go. He had gained 6 pounds in body weight, and his general physical condition had plainly improved during the period of the test. Final

examination of the urine showed a specific gravity of 1.018, with freedom from albumin, sugar, and bile, but with a slight sediment which under the microscope was found to be composed of amorphous phosphate, with a few mucous threads and calcium oxalate crystals. No cells were to be found. Repeated examination revealed one finely granular cast.

SUBJECT No. 3.—L. M. L.

A graduate student in the university; age, 22 years. Body weight at the beginning of the experiment was 70 kilograms. On July 1 the first clinical examination gave the following results: The subject was of medium size, well nourished, and well muscled. Skin and mucous membranes were of good color. Chest well formed—muscular. The heart sounds were clear, the apex beat at the fifth interspace inside of the nipple line. The lungs showed normal resonance, with normal breath sounds. The abdomen was muscular, full, soft negative; arteries soft. Body temperature, 98.2°; pulse, 82 beats per minute; regular, with good volume and tension. The urine was light yellow in color; acid in reaction; with a specific gravity of 1.016. Tests for albumin, sugar, bile, etc., were negative. The urine showed a slight cloud, which on subsidence was found to be composed of amorphous phosphate. There were no casts; no cells.

July 31 the body temperature was 99°; pulse 95 beats per minute. Nothing abnormal was to be detected in the urine or on physical examination.

September 5, body temperature, 98.8°; pulse, 110 beats per minute; fairly regular, with low volume and tension. The increased pulse rate was due apparently to excess in smoking. The heart sounds were clear. The subject was advised to diminish his smoking. The urine was free from casts, cells, or any abnormal substance. The general physical condition of the subject was excellent.

September 24, the date on which this examination was made, the subject was in a student rush, in which he was for several hours subjected to severe physical strain. This fact is mentioned, since the urine collected this day showed on microscopic examination a few finely granular casts, with some hyaline casts. Body temperature was 98.2°; pulse, 84 beats per minute; fairly regular, with low volume and tension. Aside from these casts in the urine, the examination revealed no suggestive features. The urine was entirely free from albumin and sugar. A microscopic examination of the urine on September 26 showed entire absence of casts. The excessive physical exertion endured by the subject September 24 undoubtedly accounts for the presence of the few casts found in the urine.

October 12 the body temperature was 98.1°; pulse, 94 beats per minute; fairly regular, with low volume and tension. Heart, lungs, and abdomen were normal. The general physical condition of the

subject was excellent. There was a gain of 2 pounds in body weight. The urine was clear, entirely free from casts, cells, or other sediment aside from a slight mucous cloud. There was likewise freedom from albumin, sugar, and bile.

October 19, the heart, lungs, and abdomen were normal. General physical condition excellent. Urine clear, with the exception of a slight cloud on standing. This sediment, under the microscope, showed a few crystals of calcium oxalate and several mucous threads. Two finely granular casts were found. On this date the subject was in a vigorous wrestling match, and it is probable that the casts in the urine were due to the severe physical exercise.

October 26, body temperature was 98°; pulse, 98 beats per minute; regular, with fair volume and tension. The urine had a specific gravity of 1.016 and showed on microscopic examination two fine and slightly granular casts. These two casts were found on searching four distinct slides. A few calcium oxalate crystals and some amorphous phosphates were also seen.

November 5, the final examination of this subject showed the heart, lungs, abdomen, liver, and spleen normal. His general physical condition was excellent. Subject stated that he felt no ill effects from the test; had gained in body weight. Aside from the increased heart beat noted under date of September 5, there has been no change in the original physical findings. The subject appeared to be in better condition than at the beginning of the test. His body temperature was 98°, pulse 88 beats per minute, regular, with fair volume and tension. The urine was free from albumin, sugar, bile, etc., and clear on standing. Microscopic examination failed to show any casts or cells. The subject stated that the only effect he experienced in taking the sodium benzoate was a slight feeling of nausea on the days when the larger doses were taken. This he attributed to the smell of the substance, since the nausea, he stated, was not experienced when he took the food containing the benzoate with the nostrils closed.

SUBJECT No. 4—J. F. L.

This subject was an assistant in the laboratory, 27 years of age, with a body weight of 67.2 kilograms. At the first examination made on July 9 he was found to be well developed, fairly well nourished, and muscular—a man of the clean, long-limbed, lean type. Skin and mucous membranes were of good color. The chest was broad, rather flat, with a slight depression at the lower end of sternum. The lungs were normal, with good breath sounds and normal resonance. The heart sounds were clear; the point of maximum impulse was visible in the fifth interspace inside of the nipple line. The abdomen was flat, soft, with freedom from masses. The spleen and kidneys were not palpable. Liver to costal margin. The knee

jerk was normal. Body temperature was 98.4°, pulse 70 beats per minute, regular, with good volume and tension. The urine was light yellow in color, clear, with a specific gravity of 1.018, slightly acid reaction. Tests for albumin, sugar, bile, etc., were negative. The urine was free from casts and cells.

July 30 the body temperature was 98.6°, pulse 82 beats per minute, regular, with fair volume and tension. The heart, lungs, and abdomen were normal. General physical condition was excellent. Subject stated that his general health had been fine during the past month. Body weight had increased 5 pounds. Urine was normal, with freedom from casts and cells. A few mucous threads were seen.

September 1, heart, lungs, and abdomen were normal. General condition excellent. Subject stated that his health was fine, but he was slightly constipated. He had gained 4 additional pounds in body weight. Body temperature was 98.2°, pulse 80 beats per minute, regular, with fair volume and tension. The urine was normal in every respect; no casts and no crystalline sediment.

September 23, clinical examination on this date showed the heart, lungs, and abdomen normal. Physical condition excellent. Constipation had disappeared, and subject has daily stools. Feels in excellent health. Body temperature 98.2°, pulse 74 beats per minute, regular, with fair volume and tension. Urine normal, with freedom from casts and cells, and no trace to be found of albumin, sugar, or other abnormal substances.

October 13, body temperature was 98°, pulse 80 beats per minute, regular, with good volume and tension. Heart, lungs, and abdomen were normal. General condition excellent. Had been working overtime in the laboratory and felt a bit tired, otherwise quite well. The urine was normal in every respect.

October 20, no physical examination was made on this date, as the subject appeared in excellent condition. The urine, however, was carefully examined, but no trace of any abnormal constituent was found, neither were there any casts or cells in the slight sediment which eventually developed on standing. A few mucous threads and a few crystals of calcium oxalate only were found.

October 27, near the close of the large doses of sodium benzoate, the subject was subjected to a critical physical examination. Heart, lungs, and abdomen were normal in every respect. The general condition of the subject was excellent. He felt well, had been working very hard for the past few weeks, but with no effect except a slight loss of appetite.

November 6, final examination of this subject showed the heart, lungs, and abdomen normal, liver and spleen not palpable. Body temperature was 98°, pulse 85 beats per minute, regular, with fair volume and tension. The general physical condition was excellent. If

anything, the subject appeared in better condition than at the beginning of the experiment when he was first examined. He had gained 7 to 8 pounds in body weight. No change in the physical condition of the vital organs could be detected. The subject stated that he was not conscious of any ill effect from the benzoate feeding. The subject thought that some little diuresis had been produced as the result of the benzoate. This point, however, will be discussed in connection with data to be presented under the head of "Effect on the composition of the urine." Final examination of the urine showed complete freedom from abnormal components of every kind. There were no casts, no cells. In the slight sediment which appeared in the urine only a few mucous threads were seen.

SUBJECT No. 5—E. C. M.

This subject was one of the assistants in the laboratory, 29 years of age, and weighed 67.1 kilograms at the time of the examination, June 29. He was a lean, clean-built man; skin and mucous membranes of good color, except for dark rings under his eyes, which he stated he had had all his life. The heart impulse was palpable at the fifth interspace nipple line; sounds clear at both apex and base; no murmurs. The lungs were healthy, respiratory movements normal, breath sounds faint, but no râles and no dullness. The radial arteries appeared soft, the brachials slightly thickened. The abdomen was flat and soft, with normal tympany. Liver was of normal size, spleen not palpable. No glandular enlargement; no varicose veins. Body temperature was 99°, pulse 68 beats per minute, regular, with fair volume and tension. The urine was pale yellow in color, clear on standing, slightly acid in reaction, and with a specific gravity of 1.014. There were no casts or cells present, neither albumin, sugar, bile, etc.

July 27 the subject had an acute gastro-intestinal attack, with abdominal pain, tenderness, and diarrhea. Body temperature was 99°, pulse 70. This attack was counteracted by calomel, saline, etc. Recovery was complete on July 31.

July 31, body temperature was 98°, pulse 66 beats per minute, regular, with low volume and tension. Heart sounds were faint, slight murmurish quality at apex during inspiration. The subject was given a tonic pill of strychnine 1/40, quinine 1/2, and ferri carb. sacch. The urine was perfectly normal in character and free from sediment. No casts and no cells of any kind were found.

September 25, body temperature was 98°; pulse 69 beats per minute; regular, with fair volume and tension. Heart sounds clear; good quality. General condition of the subject was excellent; had gained two pounds in weight. The urine was free from sugar, albumin, and other abnormal substances. Microscopic examination showed

complete absence of casts, cells, etc. Many mucous threads were found in the slight sediment, together with some crystals of calcium oxalate and some amorphous phosphate.

October 14 the body temperature was 98.4°; pulse 68 beats per minute; regular, with good volume and tension. Physical condition continued good. The urine was entirely free from any abnormality.

October 19, heart, lungs, and abdomen were normal. General condition was good. Urine tests for abnormal substances were all negative. No casts and no crystals of any kind were to be found.

October 26, careful physical examination of the subject showed no change from the original findings as to heart, lungs, liver, spleen, abdomen, etc. The urine was normal, and there were no casts or cells present.

November 6: The final examination of the subject was made on this date. Body temperature was 98.4°; pulse 70 beats per minute; regular, with good volume and tension. The general appearance of the subject was good; he seemed in better health than on June 29. Heart, liver, abdomen, skin, and mucous membranes were normal, except for rings under the eyes. Subject stated that he felt very well and had noticed no change in health or feeling as a result of the benzoate feeding. He had lost 2 pounds in weight during the last month, which he attributed to extra work, as he had been doing night work in addition to his daily routine. Final examination of the urine showed complete freedom from abnormal substances, with no trace of casts or sediment.

SUBJECT No. 6—W. C. R.

This subject, a graduate student in the university, weighed at the beginning of the experiment 58.8 kilograms. He was 21 years of age; of slender build, with slight muscular development. Skin and mucous membranes were of fair color. On June 29 his body temperature was 98.8°; pulse 96 beats per minute; low volume and tension. The rhythm varied slightly. Chest was symmetrical; flat, with good expansion. Breath sounds were clear; no râles and no dullness. The heart apex beat was visible at the fifth interspace nipple line; sounds clear and forceful at both apex and base. Abdomen was flat, soft, negative. Liver and spleen not enlarged. The subject had had typhoid fever ten years ago; was not at all robust in appearance. Urine was pale yellow in color, slightly acid, with a specific gravity of 1.016. Tested for albumin, sugar, bile, etc., with negative results. A slight sediment showed on standing, which under the microscope was found to consist of amorphous phosphate with a little granular matter. There were no casts and no cells.

July 30, general physical condition unchanged. Heart, lungs, and abdomen were perfectly normal. Body temperature was 99°; pulse 98 beats per minute; regular, with low volume and tension. Subject stated that he felt in excellent condition. Urine was wholly free from abnormalities. A few mucous threads were seen in the slight sediment, but no casts or cells.

August 31, on this date the subject had a slight attack of diarrhea; general abdominal pain, with gas in the intestines; headache for thirty hours. The abdomen was found full and soft; slightly tender over the left rectus; dull over colon on left side. Treatment consisted simply of Seidlitz powders, with the result that the subject was perfectly well in thirty-six hours. Body temperature was 98.4°; pulse 82 beats per minute; regular, with good volume and tension. Urine was entirely normal. No casts or cells present.

September 23, heart, lungs, and abdomen were normal. General physical condition was excellent. Subject said that he felt very well. Body weight had increased 2 pounds. Body temperature 98.8°; pulse 81; regular, with good volume and tension. Urine was free from abnormal substances. No casts; no cells; a few crystals of calcium oxalate and amorphous phosphate were present.

October 12, body temperature was 98°; pulse 70 beats per minute; regular, with low volume and tension. The heart sounds were perhaps a little less forceful, with a slightly murmurish quality to the first sound at apex. Apex beat was in the fifth interspace nipple line. No enlargement. Subject stated that he felt perfectly well. The urine was normal.

October 22, pulse 82 beats per minute; regular, with fair volume and tension. Slight murmurish quality to the first sound at apex. Physical findings were otherwise normal and unchanged. Subject felt well. Urine was free from sugar, albumin, etc. No casts or cells present. A few mucous threads and a few crystals of calcium oxalate were found, together with some amorphous phosphate.

October 28, body temperature was 98.2°; pulse 82 beats per minute; regular, with fair volume and tension.

November 7, heart, lungs, abdomen, etc., showed no changes from the original findings. Subject appeared to be in better general health than at the beginning of the test. Body temperature was 98.3°; pulse 83 beats per minute; regular, of good volume and tension. The urine was free from albumin, sugar, bile, etc. The slight sediment showed a few calcium oxalate crystals and some mucous threads. There were no casts or cells. The subject had suffered from slight indigestion and constipation since the benzoate feeding was discontinued. The heart sounds were clear and the lungs clear. Abdomen full, soft; normal tympany, except for dullness over sigmoid. The subject stated that he felt perfectly well.

CONCLUSIONS.

The foregoing clinical observations have been taken almost verbatim from the report of the medical examiner. His conclusions are summed up in the following statement:

NEW HAVEN, CONN., *December 1, 1908.*

Prof. R. H. CHITTENDEN.

DEAR SIR: In accordance with your request I examined the sodium benzoate subjects at the beginning of the test, at intervals during the course of the test, and after the benzoate feeding was discontinued. The results of my examinations are recorded in my detailed report.

In general there has been no clinical evidence at any time that the health of the men was at all impaired by the benzoate feeding; on the contrary the men appear to be in better general condition at the conclusion of the test than they were at the start. None of the men have lost in weight, while four have made appreciable gains.

Very respectfully yours,

RICHARD F. RAND, M. D.

A general survey of the clinical history of these subjects as recorded fails to show any specific action on the part of the sodium benzoate. There are, however, two or three statements that perhaps need a word of explanation. Subject W. W. H. on October 27 had a slight attack of gastro-intestinal fermentation which lasted two days. This happens to be at the close of the second benzoate period when a dosage of 4 grams per day was being taken. Again, E. C. M. on July 27, viz, at the beginning of the first benzoate period, had a slight gastro-intestinal attack. Further, W. C. R. on August 31, near the close of the first benzoate period, had a brief attack of diarrhea. It might be said that these slight disturbances of the gastro-intestinal tract were due to the benzoate. It is possible that this was the case. It is to be remembered, however, that this experiment was carried out during the hot weather of a New England summer, in a season which was unusually dry and warm. It is not at all strange if three of the subjects should have had for a day or two a slight disturbance such as is recorded above. Certainly, if the slight gastro-intestinal attack suffered by E. C. M. on July 27 was due to the action of sodium benzoate, it would naturally be expected that as the dosage was continued through the following weeks and succeeded by still larger doses in October, there would be a recurrence of these symptoms. On the contrary, the subject had this brief attack for a day or two in July and was not visited by corresponding symptoms at any later date. Further, in the case of W. C. R. the slight diarrhea which occurred August 31, if due to sodium benzoate, would naturally be expected to recur as the dosage was continued and enlarged. Further symptoms of this trouble, however, failed to appear even when the dosage was increased to the maximum of 4 grams per day. It seems far more reasonable to believe that these were incidents such as, especially in the summer time, are liable to occur in the case of any normal individual.

Reference should also be made to the case of L. M. L., whose urine on September 24, October 19 and 26, showed a few granular casts. The conclusion of the medical examiner that the appearance of these casts in the urine was due entirely to physical strain which the subject experienced on those dates seems justifiable. Certainly, if sodium benzoate was the cause, it is singular that no one of the other subjects showed similar signs. Furthermore, it is to be noted that the first appearance of the casts, viz, on September 24, was during the first after period when no sodium benzoate was being taken. Finally, emphasis is to be laid on the fact that at the close of the experiment on November 7 the urine of this subject was entirely free from casts. If sodium benzoate was responsible for the appearance of these few casts in the urine, it would naturally be expected that the deranged condition produced thereby with so large a dosage of benzoate would continue for at least a week or two after cessation of the dosage.

The clinical evidence in all six cases, weighed as carefully as possible, leads to the general conclusion that the health of the subjects was not at all impaired by the sodium benzoate fed. It is proper to add that the general better condition of the subjects as reported by the medical examiner at the conclusion of the test might well be attributed in large measure to the regular mode of life entailed by an experiment of this character.

EFFECT ON BODY WEIGHT.

The subjects were weighed at the same hour in the morning every third or fourth day throughout the entire period of the experiment. The record is shown in the following table for all six subjects. For convenience and for the purpose of obtaining a clearer view of the changes in body weight a second table is added, giving the mean body weight of each subject during given periods of seven to ten days. This second table shows the body weight of each subject during the fore period from July 6 to July 19, and then weekly during the first benzoate period, etc.:

Record of body weight.

Date.	Daily dose of benzoate.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*
July 1	0	50.8	51.6	70.0	67.2	67.1	52.8
July 4	0	50.6	52.0	70.0	67.7	66.9	52.9
July 7	0	50.9	51.1	69.0	67.0	66.8	52.6
July 11	0	51.0	51.5	69.0	67.1	67.2	53.0
July 14	0	51.2	51.3	68.3	67.1	67.2	53.6
July 17	0	51.7	51.7	69.1	68.0	67.7	53.4
July 20	.3	51.5	51.5	69.2	68.4	67.6	53.6
July 23	.3	52.2	52.1	69.2	68.6	68.1	53.2
July 25	.3	52.1	51.8	69.8	68.6	68.3	53.6
July 27	.3	52.0	52.0	69.7	68.8	67.7	52.8
July 29	.3	51.9	51.9	69.5	68.8	67.2	53.2
Aug. 1	.3	52.4	52.2	69.3	69.2	67.9	53.0
Aug. 3	.3	52.1	52.1	69.2	68.9	67.9	52.2
Aug. 5	.3	52.7	51.5	70.0	69.8	67.7	53.4

Record of body weight—Continued.

Date.	Daily dose of benzoate.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*
Aug. 8	0.3	53.0	51.2	69.2	70.1	67.7	52.5
Aug. 10	.3	52.6	51.4	69.2	70.1	67.9	52.5
Aug. 12	.3	52.7	51.0	69.1	70.0	67.6	52.6
Aug. 15	.3	53.2	51.3	69.6	69.6	68.5	52.3
Aug. 17	.3	53.0	51.4	70.4	70.4	68.2	53.2
Aug. 19	.3	53.6	51.9	69.2	70.4	68.2	53.0
Aug. 22	.3	52.9	51.7	69.9	69.9	68.5	53.3
Aug. 24	.3	52.9	51.6	69.6	70.0	68.5	52.9
Aug. 26	.3	52.9	51.3	69.6	69.5	68.4	53.1
Aug. 29	.3	53.2	51.9	69.8	70.4	68.6	53.6
Aug. 31	.3	53.2	52.3	69.6	71.0	68.9	53.6
Sept. 2	.3	53.7	52.6	69.1	71.1	68.7	54.1
Sept. 5	.3	53.7	52.1	70.1	70.6	68.5	53.6
Sept. 7	.3	53.6	52.3	70.4	71.3	68.5	54.1
Sept. 9	.3	53.7	52.4	69.9	71.1	68.7	54.0
Sept. 12	.3	53.9	52.7	70.4	70.8	68.5	54.1
Sept. 14	.3	54.1	52.3	70.2	70.7	68.2	54.0
Sept. 16	.3	53.8	52.8	70.4	71.4	68.0	54.2
Sept. 19	.3	54.3	52.9	70.0	71.4	68.4	54.1
Sept. 21	0	54.5	53.0	70.7	70.6	68.2	54.0
Sept. 23	0	55.0	52.9	71.0	71.1	68.3	54.2
Sept. 26	0	54.7	52.9	70.7	70.8	68.0	53.9
Sept. 28	0	54.2	53.2	70.4	70.7	67.5	53.9
Sept. 30	0	54.4	53.4	70.4	70.8	67.8	54.0
Oct. 3	.6	54.4	53.2	70.6	70.6	68.0	53.8
Oct. 5	.6	54.2	53.5	70.7	70.4	67.9	53.6
Oct. 7	.6	54.5	54.0	71.0	70.6	68.5	54.4
Oct. 10	1.0	54.7	53.7	71.7	70.0	68.2	54.3
Oct. 12	1.0	54.6	53.5	71.2	69.8	67.6	54.0
Oct. 14	1.0	54.3	54.4	71.2	70.5	68.1	54.0
Oct. 17	2.0	54.5	54.3	71.2	70.0	67.8	54.0
Oct. 19	2.0	53.6	54.2	70.7	69.7	67.6	53.8
Oct. 21	2.0	53.7	53.9	70.7	70.1	67.5	53.9
Oct. 24	4.0	53.8	54.2	70.7	69.5	67.4	53.9
Oct. 26	4.0	53.7	54.2	70.9	69.2	67.3	53.5
Oct. 28	4.0	53.9	54.2	70.7	69.5	67.3	53.7
Oct. 31	0	53.9	54.4	70.6	70.1	67.1	53.5
Nov. 2	0	53.8	54.5	70.8	70.0	67.2	52.9
Nov. 4	0	54.0	54.5	70.6	70.5	67.4	53.2
Nov. 7	0	53.9	54.5	71.1	70.5	67.1	52.6

Body weight of subjects.

Date.	Daily dose of benzoate.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*	*Kilograms.*
July 6 to 12	0	51.0	51.3	69.0	67.1	67.0	52.8
July 13 to 19	0	51.5	51.5	68.7	67.6	67.5	53.2
July 20 to 26	.3	51.9	51.8	69.4	68.5	68.0	53.3
July 27 to Aug. 2	.3	52.1	52.0	69.5	68.9	67.6	53.0
Aug. 3 to 9	.3	52.6	51.6	71.8	69.6	67.8	52.7
Aug. 10 to 16	.3	52.8	51.2	69.3	69.9	68.0	52.5
Aug. 17 to 23	.3	53.2	51.7	69.8	70.2	68.3	53.2
Aug. 24 to 30	.3	53.0	51.6	69.7	70.0	68.5	53.2
Aug. 31 to Sept. 6	.3	53.5	52.3	69.6	70.9	68.7	53.8
Sept. 7 to 13	.3	53.7	52.5	70.2	71.7	68.6	54.1
Sept. 14 to 20	.3	54.1	52.7	70.2	71.2	68.2	54.1
Sept. 21 to 30	0	54.6	53.1	70.7	70.8	68.0	54.0
Oct. 1 to 7	.6	54.4	53.6	70.8	70.5	68.1	53.9
Oct. 8 to 14	1.0	54.5	53.7	71.4	70.1	68.0	54.1
Oct. 15 to 21	2.0	53.9	54.1	70.9	69.9	67.6	53.9
Oct. 22 to 28	4.0	53.8	54.2	70.8	69.4	67.3	53.7
Oct. 29 to Nov. 7	0	53.9	54.5	70.8	70.3	67.2	53.1

Comparison of the figures shows that all of the subjects had at the close of the experiment a greater body weight than at the beginning. The gain in weight was quite appreciable in most instances. Reference should be made to one fact which stands out quite notice-

ably when the figures are carefully scrutinized. During the last portion of the experiment, viz, about the middle of October, there was a tendency for body weight to diminish somewhat. In this connection it should be stated that the college year commenced the last of September, so that during the last month of the experiment all of these men had a certain amount of extra work to do. This necessitated their working in the laboratory every night, so that there was an added strain which did not exist during the months of July, August, and September. It is natural to suppose that this added pressure of work may have had an influence both upon appetite and upon body weight. In any event, the fact should be given due emphasis. Examination of the data for the individual subjects shows that H. H. G. began the experiment with a body weight of 51 kilograms and reached a maximum of 54.6 kilograms during the week of September 21, after which he lost somewhat in weight, ending the experiment, however, with a body weight of 53.9 kilograms. W. W. H. began with a body weight of 51.3 kilograms and ended with a body weight of 54.5 kilograms. L. M. L. began the experiment with a body weight of 69 kilograms, and ended with a body weight of 70.8 kilograms. It is perfectly obvious, therefore, that sodium benzoate taken in the doses indicated did not lead to a loss of body weight.

Since body weight—everything else being equal—is closely connected with the daily diet, it is pertinent to remark that the quantity of food taken by these subjects did not increase with the progress of the experiment. Reference to the statements made under the head "Character of daily diet" shows that in every instance less nitrogenous food was ingested daily by all of the subjects during the last half of the experiment than was taken at the outset. Further, the fuel value of the food during the week October 8 to 14 was not essentially different from the fuel value of the food taken near the beginning of the experiment. The increase in the body weight of the subjects, therefore, must be credited, not to any excessive intake of food, but simply to a good nutritive condition, which was certainly not impaired by the sodium benzoate taken with the food.

EFFECT ON THE BLOOD.

Study of the blood was limited to a determination of the number of red corpuscles (erythrocytes), white corpuscles (leucocytes), and the hemoglobin-content of the blood during the different periods of the experiment; the object of this series of observations being to ascertain whether or no sodium benzoate exerts any noticeable influence upon the formed elements of the blood.

The blood was taken from the tip of the finger or the ear by means of a small lancet. The Thoma-Zeiss counting apparatus was employed

for the enumeration of the red and white corpuscles, while the hemoglobin was determined by the Fleischl hemometer.[a]

ERYTHROCYTES PER CUBIC MILLIMETER OF BLOOD.

Date.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
Fore period: July 2 to 8	4,436,000	5,200,000	5,760,000	5,920,000	6,240,000	5,040,000
First benzoate period: Aug. 3 to 5	4,960,000	5,500,000	5,900,000	5,664,000	5,920,000	5,800,000
First after period: Sept. 28 to Oct. 1	5,500,000	5,600,000	6,160,000	6,020,000	6,200,000	5,600,000
Second benzoate period: Oct. 14 to 16	5,040,000	5,480,000	5,624,000	5,840,000	5,760,000	5,700,000
At the close of second benzoate period: Oct. 29 to Nov. 3	5,440,000	6,200,000	5,440,000	6,400,000	5,840,000	5,360,000
Final after period: Nov. 6 to 9	5,100,000	5,760,000	5,700,000	6,160,000	5,840,000	5,680,000

LEUCOCYTES PER CUBIC MILLIMETER OF BLOOD.

Date.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
Fore period: July 2 to 8	5,700	8,750	7,900	5,600	6,500	9,500
First benzoate period: Aug. 3 to 5	6,750	13,500	8,250	6,750	9,000	7,525
First after period: Sept. 28 to Oct. 1	8,000	15,000	8,325	7,275	7,575	9,750
Second benzoate period: Oct. 14 to 16	7,000	11,000	8,650	8,500	8,500	7,700
At the close of second benzoate period: Oct. 29 to Nov. 3	7,000	7,000	9,500	8,150	8,375	7,650
Final after period: Nov. 6 to 9		9,050	10,250	6,250	8,000	9,750

HEMOGLOBIN (PER CENT OF COLOR SCALE).

Date.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
Fore period: July 2 to 8	72	77	78	78	80	77
First benzoate period: Aug. 3 to 5	75	80	78	90	80	82
First after period: Sept. 28 to Oct. 1	79	85	87	85	79	79
Second benzoate period: Oct. 14 to 16	79	85	81	80	83	81
At the close of second benzoate period: Oct. 29 to Nov. 3	78	82	86	87	88	83
Final after period: Nov. 6 to 9	80	88	83	90	85	83

Critical study of these results from all sides fails to show any decisive effect, especially when due consideration is given to the well-known fact that the counting of blood corpuscles is always attended with some uncertainty, owing to the necessarily large magnification of small errors of observation.

[a] In the enumeration of the corpuscles, all the squares on the slide were counted, namely, 144 in the case of the leucocytes and 256 for the erythrocytes, and the averages determined. Further, in most cases counts were made from two samples of blood.

In the estimation of the hemoglobin the results given are the averages of several readings on the color scale, made usually by two observers.

Considering first the erythrocytes, or red corpuscles, the figures show a numerical increase in the number of erythrocytes during those periods when the benzoate was taken and in the periods shortly thereafter in several of the subjects. This is certainly the case with the subjects H. H. G., W. W. H., and W. C. R. The difference, however, between the figures during these periods as compared with the fore period is not great. With the subject L. M. L. there was no great increase during the period of the benzoate feeding. In fact, during the second benzoate period the number of erythrocytes per cubic millimeter of blood was a trifle below the count of the fore period. With E. C. M., taking the figures as they stand, the number of erythrocytes during both benzoate periods was lower than in the fore period or in the first after period. With J. F. L. the blood counts of the first four periods showed very little variation. If one were inclined to follow the indications of the bare figures, it might be said that sodium benzoate tends to increase the number of red corpuscles in the blood. Such a statement, however, would doubtless be misleading. What the results really imply is that the sodium benzoate fed has had no appreciable effect whatever upon the number of erythrocytes in the blood, or certainly has not interfered with those conditions of nutrition which are essential to the maintenance of a normal condition of the blood.

Regarding the leucocytes, or white corpuscles, the case of W. W. H. stands out conspicuously. For this we have no explanation to offer. There was with this subject a decided increase in the number of leucocytes during the first benzoate period, the first after period, and in the second benzoate period. It is hardly logical to believe that this increase in leucocytes was due to the benzoate, since if such were the case the first after period would hardly have shown an increase over the count of the first benzoate period, and, secondly, during the second benzoate period, when the larger doses were taken, an increase rather than a decrease of leucocytes would have been expected. W. W. H. was not a robust subject, although practically well throughout the experiment with the exception noted under "Clinical observations." Aside from this peculiarity the leucocyte count with the different subjects can not, in our judgment, be interpreted as indicating any specific result in one direction or the other. White blood corpuscles are always prone to some fluctuation, and with the exception of subject W. W. H. there is throughout a fair degree of agreement. There is certainly nothing in the data presented under this head which would justify any other conclusion than that the leucocytes of the blood were not materially influenced by the sodium benzoate taken.

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Regarding the hemoglobin content of the blood, the figures show without exception a slight increase as the experiment progressed. Here, again, we are inclined to the view that it would not be wise to say that sodium benzoate tends to increase the hemoglobin content of the blood. More consistent and more in harmony with the general results of our experiment is the statement that sodium benzoate, judging by these data, certainly does not tend to decrease the content of hemoglobin and does not interfere with that condition of good health which leads to the maintenance of a normal amount of hemoglobin in the blood.

EFFECT ON THE FECES.

The feces of each subject were collected, when passed, on every day of the experiment, duly weighed and prepared for analysis. As is well known, chemical and bacteriological study of the solid excrement furnishes much valuable information regarding the influence of any substance ingested with the food on digestion, utilization of food, fermentation, putrefaction, and other changes more or less normal to the alimentary tract. Further, study of the feces may reveal the existence of incipient diarrhea, constipation, etc., important in their bearing upon the question of health. In the tables showing the daily records of urine, feces, etc., will be found the weights of feces passed by the individual subjects each day. Here, however, for convenience, we have brought together the average daily weight of the feces for periods of seven and ten days for each subject, so that comparison can be made of the fore and other periods, when benzoate was not given, with the periods when sodium benzoate was taken. Comparison of these figures makes it apparent that the daily weight of feces during the fore period was greater per day with each individual than in the later periods. In other words, at first glance it might seem that sodium benzoate had tended to reduce the amount of excrementitious matter. This, however, is not strictly true. It will be remembered that in the first three periods, covering twenty-one days, up to July 26, the intake of protein food was larger than in the later periods. Likewise, in the earlier days of the experiment a larger proportion of green, cellulose-containing food was consumed. This would naturally tend to give rise to a larger weight of feces. If, therefore, we take the results after July 26 to the end of the experiment, it will be seen that the weight of moist feces per day was not materially affected. In other words, the volume of feces for the individual subjects was not uniformly different in the long first benzoate period as contrasted with the first after period, the second benzoate period, and the final period. Minor differences, to be sure, do appear, but the table

giving average weights, showing moist feces per day, clearly bears out the statement that there was no radical change in the volume of feces passed after the 26th of July, and consequently there can not be ascribed to sodium benzoate in the dosage taken any specific effect upon the volume of feces passed per day, it being understood that the total volume and general character of the food consumed each day were essentially the same.

Average weight of moist feces per day.

Date.	Daily dose of benzoate.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 12	0	126.6	112.8	139.3	142.3	142.8	111.4
July 13 to 19	0	114.5	103.2	129.2	96.0	158.6	106.6
Average		120.5	108.0	134.2	119.1	150.7	109.0
July 20 to 26	.3	121.1	104.6	137.2	118.5	211.7	79.9
July 27 to Aug. 2	.3	66.6	65.8	111.4	116.1	170.4	82.6
Aug. 3 to 9	.3	99.3	87.4	100.1	114.9	162.0	90.3
Aug. 10 to 16	.3	99.3	57.6	95.4	98.1	107.0	78.7
Aug. 17 to 23	.3	68.7	65.0	127.6	104.1	137.0	90.9
Aug. 24 to 30	.3	76.7	91.5	109.4	106.0	160.1	101.6
Aug. 31 to Sept. 6	.3	102.6	74.8	106.3	107.3	166.2	78.5
Sept. 7 to 13	.3	124.9	65.7	96.7	129.0	134.3	101.0
Sept. 14 to 20	.3	113.2	79.5	104.3	104.5	99.2	102.5
Average		96.9	76.9	109.8	110.8	149.7	89.5
Sept. 21 to 30	0	65.8	59.4	86.1	74.2	112.4	83.8
Average		65.8	59.4	86.1	74.2	112.4	83.8
Oct. 1 to 7	.6	88.5	65.6	88.8	71.9	100.0	89.3
Oct. 8 to 14	1.0	106.9	67.9	106.5	95.3	119.1	115.8
Oct. 15 to 21	2.0	70.3	63.6	82.5	85.7	120.2	79.4
Oct. 22 to 28	4.0	60.7	70.5	80.7	61.6	117.9	71.8
Average		81.6	66.9	89.6	78.3	114.3	89.0
Oct. 29 to Nov. 7	0	60.1	68.5	89.0	108.8	106.7	93.4
Average		60.1	68.5	89.0	108.8	106.7	93.4

Regarding the content of water in the feces, the following table shows the average daily results for the periods indicated under the head "Date." Here, again, there is no marked effect to be ascribed to the benzoate. In the long first benzoate period each individual shows a slight increase in the percentage of water in the feces. It amounts, however, to only 3 to 4 per cent. To ascribe this slight difference to the specific action of benzoate would seem hazardous when the data during the second benzoate period, the dosage being largely increased, show no noticeable change in the water content of the feces. Obviously, sodium benzoate in the doses given to our subjects does not lead to diarrhea or any kindred trouble. So far as the bulk and water content of the feces is concerned, there is no indication of any deviation from the normal.

Average content of water in the feces per day.[a]

Date.	Daily dose of benzoate.	H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
July 6 to 12	0	70	73	69	75	73	70
July 13 to 19	0	75	71	72	73	76	73
Average		73	72	70	74	74	71
July 20 to 26	.3	76	76	79	73	80	75
July 27 to Aug. 2	.3	73	75	78	77	84	77
Aug. 3 to 9	.3	75	79	74	76	80	76
Aug. 10 to 16	.3	76	73	77	77	78	77
Aug. 17 to 23	.3	69	69	81	76	81	75
Aug. 24 to 30	.3	71	78	78	77	81	76
Aug. 31 to Sept. 6	.3	78	76	78	79	84	77
Sept. 7 to 13	.3	80	77	77	79	80	75
Sept. 14 to 20	.3	78	75	78	75	79	78
Average		75	75	77	76	80	76
Sept. 21 to 30	0	74	74	76	72	78	78
Average		74	74	76	72	78	78
Oct. 1 to 7	0.6	77	74	74	72	77	77
Oct. 8 to 14	1.0	79	72	76	75	78	81
Oct. 15 to 21	2.0	77	74	75	73	78	78
Oct. 22 to 28	4.0	78	76	73	73	77	74
Average		77	74	74	73	77	77
Oct. 29 to Nov. 7	0	74	75	76	77	78	78
Average		74	75	76	77	78	78

[a] Calculated from the weight of the air-dry material.

INFLUENCE ON DIGESTION AND UTILIZATION OF PROTEIN FOOD.

The amount of nitrogen contained in the feces is the best measure that we possess of the degree of digestion and absorption of the protein or nitrogenous foodstuffs. Knowing the amount of nitrogen in the daily food and collecting the feces of the corresponding 24 hours, a determination of the nitrogen contained therein will, by comparison with the nitrogen intake, show the extent of utilization of the ingested protein food. In this way is obtained an indication of the extent to which the nitrogenous food is digested and absorbed, and any fluctuation in the content of fecal nitrogen is to be associated with corresponding fluctuations in the extent of digestion and utilization. From the tables showing the daily record of the individual subjects, the intake of nitrogen in the form of food and output of nitrogen in the feces have been collected and brought together in the following tables, giving in summary form the average daily intake of nitrogen and average daily output of nitrogen in the feces for the different periods of the experiment, thus giving the degree of digestion and absorption of the daily food expressed in terms of nitrogen, per cent utilized. It may be added here that the nitrogen of the daily food (for details regarding nitrogen content of the food, see daily food charts) was determined by the Kjeldahl method with addition

of mercuric oxide. Nitrogen of the feces was determined in a similar manner, using the dried material.

The following tables show the utilization of nitrogen by each subject during the fore period, from July 6 to July 19; during the first benzoate period, from July 20 to September 20; during the first after period, from September 21 to September 30; during the second benzoate period, from October 1 to October 28; and in the final after period from October 29 to November 7. In every case it will be found by scrutiny of the results that the utilization of nitrogen, meaning thereby the digestion and absorption of the protein food, showed at the end of the experiment a slight improvement over that at the commencement. Thus, with the subject W. W. H., during the fore period 89 per cent of the nitrogen was utilized; during the first benzoate period the result was likewise 89 per cent; during the first after period 91 per cent; during the second benzoate period 90 per cent; while in the final after period 90 per cent was utilized. This is a sample of the utilization of nitrogen by all the subjects in the different periods of the experiment. We are not disposed to imply that sodium benzoate tends to improve the utilization of nitrogen. The point to be emphasized is that there was no deterioration; no falling off in the completeness of digestion and absorption of the protein food. Such slight gain as is indicated by the figures, if of any significance at all, is to be attributed solely to the general improvement in the health of the individuals. In other words, the sodium benzoate taken during the experiment exercised no deleterious influence upon the digestion and utilization of the protein food.

Average utilization of nitrogen per day.

SUBJECT H. H. G.

Date.	Sodium benzoate per day.	Nitrogen.			
		Intake in food.	Output in feces.	Difference.	Utilization.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Per cent.*
July 6 to 12	0	15.28	1.65	13.63	89
July 13 to 19	0	12.29	1.48	10.81	88
Average		13.78	1.56	12.22	88.5
July 20 to 26	.3	12.98	1.68	11.30	87
July 27 to August 2	.3	11.76	1.11	10.65	90
August 3 to 9	.3	11.88	1.36	10.52	88
August 10 to 16	.3	12.00	1.21	10.79	90
August 17 to 23	.3	10.58	1.46	9.12	86
August 24 to 30	.3	10.87	1.19	9.68	89
August 31 to September 6	.3	11.43	1.38	10.05	87
September 7 to 13	.3	11.72	1.42	10.30	87
September 14 to 20	.3	11.59	1.64	9.95	85
Average		11.64	1.38	10.26	88
September 21 to 30	0	11.14	1.08	10.06	90
Average		11.14	1.08	10.06	90

Average utilization of nitrogen per day—Continued.

SUBJECT H. H. G.—Continued.

Date.	Sodium benzoate per day.	Nitrogen. Intake in food.	Nitrogen. Output in feces.	Nitrogen. Difference.	Nitrogen. Utilization.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Per cent.*
October 1 to 7	0.6	10.64	1.33	9.31	87
October 8 to 14	1.0	11.96	1.28	10.68	89
October 15 to 21	2.0	10.57	1.00	9.57	90
October 22 to 28	4.0	11.06	.92	10.14	91
Average	....	11.08	1.13	9.92	89
October 29 to November 7	0	11.82	1.06	10.76	91
Average	....	11.82	1.06	10.76	91

SUBJECT W. W. H.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0	14.32	1.35	12.97	90
July 13 to 19	0	12.68	1.50	11.18	88
Average	....	13.50	1.42	12.08	89
July 20 to 26	.3	12.98	1.48	11.50	88
July 27 to August 2	.3	11.99	1.12	10.87	90
August 3 to 9	.3	9.26	.99	8.27	89
August 10 to 16	.3	12.05	1.01	11.04	91
August 17 to 23	.3	10.79	1.17	9.62	89
August 24 to 30	.3	11.54	1.38	10.16	88
August 31 to September 6	.3	11.32	1.33	9.99	88
September 7 to 13	.3	11.91	1.08	10.83	90
September 14 to 20	.3	11.86	1.23	10.63	89
Average	....	11.52	1.20	10.32	89
September 21 to 30	0	11.32	.94	10.38	91
Average	....	11.32	.94	10.38	91
October 1 to 7	.6	11.88	1.11	10.77	90
October 8 to 14	1.0	12.06	1.24	10.82	90
October 15 to 21	2.0	12.26	1.08	11.18	90
October 22 to 28	4.0	11.58	1.10	10.48	90
Average	....	11.94	1.13	10.81	90
October 29 to November 7	0	11.41	1.06	10.35	90
Average	....	11.41	1.06	10.35	90

SUBJECT L. M. L.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0	15.62	2.13	13.49	86
July 13 to 19	0	14.94	1.74	13.20	88
Average	....	15.28	1.93	13.35	87
July 20 to 26	.3	14.76	1.88	12.88	87
July 27 to August 2	.3	12.45	1.55	10.90	87
August 3 to 9	.3	12.71	1.55	11.16	87
August 10 to 16	.3	11.81	1.38	10.43	88
August 17 to 23	.3	11.40	1.65	9.75	85
August 24 to 30	.3	12.33	1.60	10.73	87
August 31 to September 6	.3	12.19	1.49	10.70	87
September 7 to 13	.3	13.11	1.50	11.61	89
September 14 to 20	.3	13.14	1.40	11.74	89
Average	....	12.65	1.55	11.10	89
September 21 to 30	0	12.39	1.33	11.06	89
Average	....	12.39	1.33	11.06	89

Average utilization of nitrogen per day—Continued.

SUBJECT L. M. L.—Continued.

Date.	Sodium benzoate per day.	Nitrogen. Intake in food.	Output in feces.	Difference.	Utilization.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Per cent.*
October 1 to 7	0.6	13.00	1.53	11.47	88
October 8 to 14	1.0	13.32	1.68	11.64	87
October 15 to 21	2.0	12.84	1.38	11.46	88
October 22 to 28	4.0	11.69	1.32	10.37	88
Average	....	12.69	1.47	11.22	87
October 29 to November 7	0	13.23	1.36	11.87	89
Average	....	13.23	1.36	11.87	89

SUBJECT J. F. L.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0	14.37	1.98	12.39	86
July 13 to 19	0	13.05	1.67	11.48	87
Average	....	13.71	1.82	11.93	86.5
July 20 to 26	.3	14.58	1.79	12.79	87
July 27 to August 2	.3	12.89	1.49	11.40	88
August 3 to 9	.3	14.12	1.62	12.50	88
August 10 to 16	.3	12.40	1.45	10.95	88
August 17 to 23	.3	12.32	1.71	10.61	86
August 24 to 30	.3	12.94	1.74	11.20	86
August 31 to September 6	.3	12.62	1.54	11.08	87
September 7 to 13	.3	13.10	1.68	11.42	87
September 14 to 20	.3	13.15	1.61	11.54	87
Average	....	13.12	1.62	11.50	87
September 21 to 30	0	12.63	1.29	11.34	89
Average	....	12.63	1.29	11.34	89
October 1 to 7	.6	12.66	1.27	11.39	89
October 8 to 14	1.0	11.93	1.53	10.40	87
October 15 to 21	2.0	11.83	1.52	10.31	87
October 22 to 28	4.0	11.29	1.07	10.22	90
Average	....	11.90	1.35	10.55	88
October 29 to November 7	0	13.08	1.51	11.57	88
Average	....	13.08	1.51	11.57	88

SUBJECT E. C. M.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0	15.69	1.75	13.94	88
July 13 to 19	0	12.36	1.82	10.54	85
Average	....	14.02	1.78	12.24	86
July 20 to 26	.3	15.15	2.16	12.99	85
July 27 to August 2	.3	10.98	1.38	9.60	87
August 3 to 9	.3	13.02	1.81	11.21	86
August 10 to 16	.3	13.36	1.53	11.83	88
August 17 to 23	.3	12.42	1.67	10.75	86
August 24 to 30	.3	13.51	1.93	11.58	85
August 31 to September 6	.3	12.73	1.77	10.96	86
September 7 to 13	.3	11.68	1.58	10.10	86
September 14 to 20	.3	12.13	1.17	10.96	90
Average	....	12.77	1.65	11.11	86
September 21 to 30	0	12.28	1.33	10.95	89
Average	....	12.28	1.33	10.95	89

Average utilization of nitrogen per day—Continued.

SUBJECT E. C. M.—Continued.

Date.	Sodium benzoate per day.	Nitrogen. Intake in food.	Nitrogen. Output in feces.	Nitrogen. Difference.	Nitrogen. Utilization.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Per cent.*
October 1 to 7	0.6	12.24	1.53	10.71	87
October 8 to 14	1.0	12.30	1.41	10.89	88
October 15 to 21	2.0	11.77	1.22	10.55	89
October 22 to 28	4.0	12.22	1.67	10.55	86
Average		12.13	1.45	10.68	87
October 29 to November 7	0	12.88	1.46	11.42	88
Average		12.88	1.46	11.42	88

SUBJECT W. C. R.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0	12.80	1.78	11.02	86
July 13 to 19	0	10.32	1.63	8.69	84
Average		11.56	1.70	9.85	85
July 20 to 26	.3	11.54	1.30	10.24	88
July 27 to August 2	.3	10.48	1.23	9.25	88
August 3 to 9	.3	10.74	1.30	9.44	87
August 10 to 16	.3	10.06	1.09	8.97	89
August 17 to 23	.3	11.08	1.48	9.60	86
August 24 to 30	.3	11.74	1.59	10.15	86
August 31 to September 6	.3	10.70	1.23	9.47	88
September 7 to 13	.3	11.55	1.52	10.03	86
September 14 to 20	.3	11.90	1.31	10.59	89
Average		11.08	1.34	9.74	87
September 21 to 30	0	11.18	1.24	9.94	88
Average		11.18	1.24	9.94	88
October 1 to 7	.6	11.91	1.38	10.53	88
October 8 to 14	1.0	11.51	1.35	10.16	88
October 15 to 21	2.0	11.19	1.17	10.02	89
October 22 to 28	4.0	10.87	1.18	9.71	89
Average		11.37	1.27	10.10	88
October 29 to November 7	0	11.29	1.31	9.98	88
Average		11.29	1.31	9.98	88

INFLUENCE ON DIGESTION AND UTILIZATION OF FAT.

The extent to which the fat of the food is made available for the needs of the body is determined by ascertaining the amount of fat which passes through the alimentary tract in the feces. Knowing the amount of fat contained in the daily food, it is then easy, by a simple process of subtraction, to estimate the amount of fat per day, or in any given period of time, unabsorbed, and thus figure the extent of its utilization. Reference to the tables showing the daily food composition of the individual subjects will give the data for the intake of fat. Throughout the experiment, during the stated periods, all articles of food were carefully analyzed for their content of fat. During corresponding periods of time the fat of the feces was likewise carefully determined. In the tables showing the daily record of the

subjects will be found the amount of fat utilized during the different seven-day periods of the experiment. These data are brought together in the following tables, in which is shown the percentage utilization of the ingested fat for the fore period, the two benzoate periods, etc. From examination of these tables it is seen that in every case, with the exception of J. F. L., the utilization of fat showed a noticeable improvement throughout the experiment. Thus in the case of H. H. G. the average utilization of fat during the fore period was 95 per cent; during the first benzoate period, 96.6 per cent; during the first after period, 98 per cent; during the second benzoate period, 98 per cent; during the final after period, 98 per cent. These figures are practically duplicated with all of the subjects excepting J. F. L. In the case of the latter subject, while the difference is not great, there is a slightly diminished utilization of fat during the first benzoate period, viz, 96.6 per cent, as contrasted with 98 per cent in the fore period. In the second benzoate period, however, the utilization of fat amounted to 97.5 per cent, while in the last after period it was 98 per cent—the same figure as in the fore period. It is thus plainly apparent that, so far as analysis will show, the sodium benzoate fed was without any appreciable influence upon the digestion and absorption of the fat of the food. The slight improvement in utilization indicated by the majority of the figures is too small to have any special significance. The data are simply in harmony with the general fact that the subjects were throughout the experiment showing a slight improvement in their physical condition. In any event it is plain that sodium benzoate does not exert any deleterious influence upon the digestion and absorption of fat; certainly not in the doses employed in our experiment.

Average utilization of fat per day.

SUBJECT H. H. G.

Date.	Sodium benzoate per day.	Fat (ether extract).			
		Intake in food.	Output in feces.	Difference.	Utilization.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Per cent.*
July 6 to 12	0				
July 13 to 19	0	107.56	4.34	103.22	95
Average		107.56	4.34	103.22	95
July 20 to 26	.3				
July 27 to August 2	.3	107.00	2.39	104.61	97
August 3 to 9	.3				
August 10 to 16	.3				
August 17 to 23	.3	93.53	2.94	90.59	96
August 24 to 30	.3				
August 31 to September 6	.3				
September 7 to 13	.3	119.82	2.49	117.33	97
September 14 to 20	.3				
Average		106.78	2.60	104.18	96.6
September 21 to 30	0	108.55	2.12	106.43	98
Average		108.55	2.12	106.43	98

Average utilization of fat per day—Continued.

SUBJECT H. H. G.—Continued.

Date.	Sodium benzoate per day.	Fat (ether extract). Intake in food.	Output in feces.	Difference.	Utilization.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Per cent.*
October 1 to 7	0.6				
October 8 to 14	1.0	111.00	1.89	109.11	98
October 15 to 21	2.0				
October 22 to 28	4.0	116.10	1.94	114.16	98
Average		113.50	1.91	111.59	98
October 29 to November 7	0	111.63	1.97	109.66	98
Average		111.63	1.97	109.66	98

SUBJECT W. W. H.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0				
July 13 to 19	0	98.63	3.32	95.31	96
Average		98.63	3.32	95.31	96
July 20 to 26	.3				
July 27 to August 2	.3	142.48	1.75	140.73	98
August 3 to 9	.3				
August 10 to 16	.3				
August 17 to 23	.3	129.87	3.05	126.82	97
August 24 to 30	.3				
August 31 to September 6	.3				
September 7 to 13	.3	159.38	1.72	157.66	98
September 14 to 20	.3				
Average		143.91	2.17	141.73	97
September 21 to 30	0	145.25	1.74	143.51	98
Average		145.25	1.74	143.51	98
October 1 to 7	.6				
October 8 to 14	1.0	152.94	1.98	150.96	98
October 15 to 21	2.0				
October 22 to 28	4.0	160.25	2.29	157.96	98
Average		156.59	2.13	154.46	98
October 29 to November 7	0	123.11	1.54	121.57	98
Average		123.11	1.54	121.57	98

SUBJECT L. M. L.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0				
July 13 to 19	0	121.10	4.77	116.33	96
Average		121.10	4.77	116.33	96
July 20 to 26	.3				
July 27 to August 2	.3	138.99	3.38	135.61	97
August 3 to 9	.3				
August 10 to 16	.3				
August 17 to 23	.3	131.42	3.14	128.28	97
August 24 to 30	.3				
August 31 to September 6	.3				
September 7 to 13	.3	156.41	3.21	153.20	97
September 14 to 20	.3				
Average		142.26	3.24	139.03	97
September 21 to 30	0	138.34	2.98	135.36	97
Average		138.34	2.98	135.36	97

Average utilization of fat per day—Continued.

SUBJECT L. M. L.—Continued.

Date.	Sodium benzoate per day.	Fat (ether extract).			
		Intake in food.	Output in feces.	Difference.	Utilization.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Per cent.*
October 1 to 7	0.6				
October 8 to 14	1.0	135.00	3.02	131.98	97
October 15 to 21	2.0				
October 22 to 28	4.0	139.17	3.00	136.17	97
Average		137.08	3.01	134.07	97
October 29 to November 7	0	130.50	2.79	127.71	97
Average		130.50	2.79	127.71	97

SUBJECT J. F. L.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0				
July 13 to 19	0	120.53	2.47	118.06	98
Average		120.53	2.47	118.06	98
July 20 to 26	.3				
July 27 to August 2	.3	147.96	3.39	143.57	97
August 3 to 9	.3				
August 10 to 16	.3				
August 17 to 23	.3	124.90	3.54	120.46	96
August 24 to 30	.3				
August 31 to September 6	.3				
September 7 to 13	.3	133.00	3.09	129.91	97
September 14 to 20	.3				
Average		135.28	3.34	131.94	96.6
September 21 to 30	0	120.33	2.76	117.57	96
Average		120.33	2.76	117.57	96
October 1 to 7	.6				
October 8 to 14	1.0	112.69	2.57	110.12	97
October 15 to 21	2.0				
October 22 to 28	4.0	120.29	1.85	118.34	98
Average		114.08	2.21	114.23	97.5
October 29 to November 7	0	130.33	2.17	128.16	98
Average		130.33	2.17	128.16	98

SUBJECT E. C. M.

Date.	Sodium benzoate per day.	Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0				
July 13 to 19	0	99.38	4.50	94.88	95
Average		99.38	4.50	94.88	95
July 20 to 26	.3				
July 27 to August 2	.3	120.23	3.12	117.11	97
August 3 to 9	.3				
August 10 to 16	.3				
August 17 to 23	.3	114.62	3.53	111.09	97
August 24 to 30	.3				
August 31 to September 6	.3				
September 7 to 13	.3	122.73	2.74	120.00	97
September 14 to 20	.3				
Average		119.19	3.12	116.06	97
September 21 to 30	0	124.90	2.08	122.82	98
Average		124.90	2.08	122.82	98

Average utilization of fat per day—Continued.

SUBJECT E. C. M.—Continued.

Date.	Sodium benzoate per day.	Fat (ether extract). Intake in food.	Output in feces.	Difference.	Utilization.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Per cent.*
October 1 to 7	0.6				
October 8 to 14	1.0	131.85	2.89	128.96	98
October 15 to 21	2.0				
October 22 to 28	4.0	143.21	3.72	139.49	97
Average		137.53	3.30	134.22	97
October 29 to November 7	0	142.38	3.88	138.50	97
Average		142.38	3.88	138.50	97

SUBJECT W. C. R.

Date.	Sodium benzoate per day.	Fat (ether extract). Intake in food.	Output in feces.	Difference.	Utilization.
July 6 to 12	0				
July 13 to 19	0	81.30	2.96	78.34	96
Average		81.30	2.96	78.34	96
July 20 to 26	.3				
July 27 to August 2	.3	100.56	1.90	98.66	98
August 3 to 9	.3				
August 10 to 16	.3				
August 17 to 23	.3	110.70	2.35	108.35	97
August 24 to 30	.3				
August 31 to September 6	.3				
September 7 to 13	.3	112.59	2.44	110.15	97
September 14 to 20	.3				
Average		107.95	2.23	105.72	97
September 21 to 30	0	120.00	1.97	118.03	98
Average		120.00	1.97	118.03	98
October 1 to 7	.6				
October 8 to 14	1.0	112.92	2.18	110.74	98
October 15 to 21	2.0				
October 22 to 28	4.0	109.28	2.19	107.09	98
Average		111.10	2.18	108.92	98
October 29 to November 7	0	96.69	1.40	95.29	98
Average		96.69	1.40	95.29	98

INFLUENCE ON DIGESTION AS MEASURED BY THE SCHMIDT METHOD.

While chemical examination of the feces is competent to show any material change in the digestion of the protein or fat of the food, a substance such as sodium benzoate might exert a slight inhibitory effect upon the digestion of different articles of food without producing any marked change in the chemical composition of the feces. Further, it is well to employ additional methods to substantiate, if possible, the findings by chemical analysis. With this end in view, the feces of the individual subjects were at given periods examined carefully, microscopically and macroscopically, after the method employed by Schmidt, as described by Steele in Medical News, December 16, 1905. Most stress was laid on ascertaining whether

abnormal amounts of undigested muscle fiber, connective tissue, mucin, or starch grains would appear in the feces during the feeding of sodium benzoate. The reaction of the feces was likewise noted with litmus and mercuric chloride. Attention was also given to the possible occurrence of abnormal quantities of fat.

In making the test a special diet as recommended by Schmidt was given for two days, in which care was taken to avoid the ingestion of food rich in cellulose, seeds, skins of fruits, or other ingredients which are absolutely indigestible in the human alimentary tract. The feces for given periods were separated by means of lampblack. In examining the feces a portion about the size of an English walnut was ground up thoroughly in a mortar, with a small amount of water. The well-triturated material was then placed in a Petri dish and examined, both with and without the microscope, for unchanged muscle fibers, connective tissue, and mucin. For the detection of starch granules the slides were treated with a drop of iodine solution. In cases of doubt as to the presence of mucin or connective tissue a drop of dilute acetic acid was applied to the material. The reaction of the feces to litmus was determined by means of moistened litmus paper. The hydrobilirubin test was made by mixing some of the triturated feces with an equal volume of a saturated solution of mercuric chloride.

Examinations of the feces by this method were made on the following days: July 15 to 16, during the fore period; August 12 to 14, during the first benzoate period; September 2 to 4, likewise in the first benzoate period; September 23 to 25, in the first after period; October 23 to 25, in the second benzoate period; October 31 to November 1, at the beginning of the second after period; and November 3 to 4, in the final after period.

The results of these tests may be briefly stated as follows: The character of the feces appeared at all times to be normal. While there were occasionally small bits of connective tissue or muscle fiber, they could not be regarded as being present in abnormal amounts. Potato starch granules were rarely observed. The reaction to litmus was neutral or slightly acid. In the corrosive sublimate tests for hydrobilirubin a decided pink coloration was obtained in every instance. Except for the occasional presence of small bits of vegetable or fruit skins and seeds, the character of the feces seemed to be unchanged during the entire period of the investigation.

INFLUENCE ON THE INTESTINAL FLORA.

With a view to ascertaining whether sodium benzoate exerts any influence upon the character of the bacteria of the intestines, comparative studies of the intestinal flora were made during the different periods of the experiment. For this purpose definite amounts of

feces (1 gram) were introduced into 10 cubic centimeters of physiological salt solution and triturated with a glass rod. Two or three platinum wire loopfuls of the suspension were spread over the surface of microscope slides and allowed to dry. The slides were then stained by the ordinary Gram method, and placed serially in trays. Thorough microscopic examinations were made to determine any marked differences in the nature of the flora during the various periods. For the first fourteen weeks the feces were stained twice a week, while during the remaining four weeks such stained series were prepared three times a week. The following statements are taken almost verbatim from Doctor Rettger's report of his findings:

To the practiced observer, so-called "normal feces" present a more or less definite appearance when stained by the Gram method. Slight, and in a few instances marked, differences may occur, but on the whole the slides tend to have a uniform character. The nature of the flora is frequently influenced by diet and by pathological conditions. In order to obtain a "normal" picture of the stained feces a large number of samples from all the subjects were examined during the first nonbenzoate period. These slides were then compared with those of the different benzoate, as well as nonbenzoate, periods.

The character of the "normal" slides may be described briefly as follows: Among the Gram-staining organisms the most prominent were the large or giant cocci (sewage streptococci) occurring single, in pairs or in chains of three or more. Along with these were a large number of smaller micro- or diplo-cocci, and still others that were quite small, like the pus cocci. Occasional giant bacilli would be seen, single, or in short chains and somewhat resembling *B. ramosus*. More numerous than these were smaller rods of the capsulatus-aerogenes type, and also the still smaller and more slender forms which were often decidedly curved (*B. acidophilus?*). Rarely the branching, club-shaped form (*B. bifidus?*) was seen. A small number of very small, thin rods like *B. pyocyaneus* were also usually present. These were frequently in pairs.

In the pink or red background, which largely predominated over the blue or violet, the most prominent organisms to be regularly seen were the very slender and long, often curved, rods (to a great extent like *B. putrificus* without its spore), and the short organism of the colon bacillus type. Mingled with these were a much smaller number of intermediate forms.

While there were numerous departures from the above picture, the differences were between individual slides, and not between different series or the slides of the different periods. For example, two samples of feces during the first benzoate period were marked by an unusually large number of Gram positive long, slender rods, while a third contained an excess of the Gram positive giant bacilli and

giant cocci, and the remaining three slides were apparently normal. In another series of the same period two of the slides contained an unusual number of the long, slender, often curved, Gram positive rods (*B. acidophilus?*), while the remaining four appeared to be normal. Again, in the same benzoate period, one of the slides showed a predominance of long, slender Gram positive bacilli and the Gram negative bacilli of the colon bacillus type. A second slide of this series was more Gram positive than was usually seen, while in two of the remaining four slides the giant and smaller cocci were greatly in excess over the normal.

In one of the slides of the second nonbenzoate period the Gram positive giant bacilli were numerous, while in a second the cocci largely predominated, and in a third of the same series there were very few of the long, slender Gram negative forms, but an abundance of the Gram negative organisms of the colon bacillus type. In another slide of the same series Gram positive bacilli of all types were present in large numbers.

The slides that were prepared during the last four weeks of the investigation were much more uniform in appearance than at any time before. These four weeks covered a large part of the last or high benzoate period and the entire last nonbenzoate period. Although special emphasis was placed on the comparative study of these slides, it was impossible to note any differences whatever between the feces of the two periods.

There is no evidence in the data obtained that the ingestion of sodium benzoate visibly affected the character of the intestinal flora, as revealed by the Gram's stain and microscopic examination. While there were marked differences between different slides, it was impossible to associate any of the variations with any of the benzoate periods. The differences were those of individual feces and not of any particular series or groups of series.

FERMENTATION TESTS WITH THE FECES.

These tests were made with dextrose (1 per cent) bouillon, in Smith fermentation tubes. The tubes were inoculated with one platinum loopful of the suspension of feces (1 gram feces in 10 c. c. of saline solution), and kept at incubator temperature for 20 to 24 hours. Duplicate tubes were always employed, and the average volume of gas in the closed arm noted. A second examination was made at the end of about 48 hours. As the results of the second examination rarely differed from those of the first, only one set of figures are given here, namely, those obtained at the end of the first incubation period.

As will be seen from the accompanying tables, the average amount of gas during the benzoate periods was slightly less than when no

benzoate was given, perhaps implying a slight degree of inhibition on the development of gas-producing bacteria. The differences are so slight, however, that no special significance can be attached to them.

Percentages of gas in closed arm of tube.

Subject.	Fore period.			First benzoate period.								
	July.			July.				August.				
	8.	13.	16.	21.	23.	28.	30.	4.	6.	12.	18.	21.
H. H. G	25	30	22	20	28	25	20	30	22	22	25	21
W. W. H	30	30	30	25	19	......	25	25	30	20	19	25
L. M. L	25	25	15	25	25	25	16	21	25	20	22	25
J. F. L	25	25	20	25	25	28	18	25	20	25	20	25
E. C. M	28	25	22	30	19	30	20	25	20	22	25	30
W. C. R	20	25	22	20	16	30	19	38	28	25	20	25

Subject.	First benzoate period (continued).								First after period.			Second benzoate.	
	August.		September.						September.			October.	
	25.	27.	1.	3.	8.	10.	15.	17.	22.	24.	29.	1.	6.
H. H. G	30	28	25	33	22	20	30	30	30	25	33	35	22
W. W. H	25	25	25	25	20	25	25	25	35	25	33	30	25
L. M. L	25	28	22	25	22	20	20	25	22	21	35	30	25
J. F. L	30	20	15	21	25	20	23	25	21	......	33	35	22
E. C. M	25	20	25	25	19	15	28	28	20	......	35	26	20
W. C. R	24	24	28	30	24	22	25	23	25	19	22	28	23

Subject.	Second or high benzoate period (continued).								Final after period.				
	October.								October.	November.			
	8.	13.	15.	20.	21.	22.	25.	27.	29.	1.	3.	5.	8.
H. H. G	25	24	25	20	......	25	24	25	25	28	20	......	20
W. W. H	17	33	28	25	20	......	21	30	25	26	30	30	10
L. M. L	30	25	20	20	22	25	30	20	20	25	34	30	25
J. F. L	15	33	17	20	30	......	16	23	25	23	33	16	18
E. C. M	25	25	19	20	25	25	16	20	30	25	30	28	19
W. C. R	20	29	16	18	20	23	30	15	20	30	25	15	16

SEDIMENTS IN BOUILLON AND IN THE DEXTROSE-BOUILLON FERMENTATION TUBES, INOCULATED WITH FECES.

The sediments in cultures 24 hours old were stained by the Gram method, and examined for the purpose of observing any influence that the ingestion of the sodium benzoate might have on the character of the sediments.

It was found that the bouillon sediments were fairly uniform throughout the investigation. They consisted largely of the colon bacillus, often in practically pure form. Occasionally spore-bearing bacilli of the *subtilis* type were present in noticeable quantities;

also streptococci and rather large Gram positive bacilli somewhat resembling the *Bacillus aerogenes capsulatus.* The irregular branching Gram positive organism and the slender G + curved rods were rarely observed. None of these forms could be associated with any particular benzoate or nonbenzoate periods.

In the sediments of the dextrose-bouillon fermentation tubes greater differences were noted. While the colon bacillus was usually the predominating organism, the slides frequently had a decidedly Gram positive appearance, due mostly to the presence of the large sewage streptococci and the smaller streptococcus form, and to the two Gram positive bacilli already described—the irregular branching organism (*B. bifidus*) and the long, slender, curved rod (*B. acidophilus?*). The larger rods of the aerogenes-capsulatus type were also frequently observed. The variations were, however, only between individual slides, and apparently had nothing to do with the ingestion of the benzoate. For example, the branching, often club-shaped, Gram positive organism, presumably Tissier's *B. bifidus,* was of rather common occurrence in the sediments from the feces of one of the men (H. H. G.) and seldom, if at all, in those of W. C. R. None of the above irregularities in the character of the sediments could be associated with any particular benzoate or nonbenzoate period.

INFLUENCE ON THE PUTREFACTION PRODUCTS IN THE FECES.

For the detection of phenol, indol, and skatol 20 to 25 grams of feces were treated with 250 c. c. of water, acidified with 4 to 5 c. c. of dilute sulphuric acid and subjected to steam distillation until 150 c. c. of distillate were obtained. The distillate was then tested for phenol by boiling with a few drops of Millon's reagent. The reactions were noted as negative, slight, moderate, or strong.

Indol was at first detected in the distillate by the use of two reagents, concentrated nitric acid and Ehrlich's aldehyde (dimethylamidobenzaldehyde). The two tests were employed side by side for about six weeks, when the nitric acid test was discontinued. The method of testing with Ehrlich's aldehyde was simply to add four or five drops of the aldehyde solution (made by dissolving 15 grams of the aldehyde in 300 c. c. of a 10 per cent solution of sulphuric acid). With small amounts of indol a rose to deep red color is obtained in the cold, the reaction being a very delicate one. The results are designated as negative, slight, moderate, and strong. As the amount of indol was at no time large, the Herter method of testing for it and removing it from solution with B-napthaquinone-sodium-monosulphonate was not regularly employed.

In the detection of skatol two reagents were used at first, namely, concentrated sulphuric acid and Ehrlich's aldehyde. The former was discontinued after about two months. On heating a solution containing skatol with Ehrlich's aldehyde solution a blue color is obtained, in contrast to the indol test. When indol and skatol are both present, the indol must first be shaken out with a solution of the B-naphthaquinone-sodium-monosulphonate, as described by Herter. (See Journ. Biol. Chem., II, p. 267, 1906.) Skatol was, however, not observed at any time, and only the indol-red reaction was obtained when indol was present, or there was no apparent reaction at all.

Phenol in the feces.

[S indicates slight, M moderate, and St strong reactions.]

Subject.	Fore period.	First benzoate period.							First after period.	Second benzoate period.				Final after period.
	July.	July.		August.			September.		Sept.	October.				Nov.
	12.	23.	30.	6.	17.	25.	8.	15.	22.	6.	13.	20.	27.	4.
H. H. G.	S	St	S	M	S	St	S	S	M	M	St	M	M	St
W. W. H.	M	M	St	M	M	S	S	M	St	M	St	M	St	St
L. M. L.	S	M	S	M	S	M	S	S	S	S	M	M	M	M
J. F. L.	S	M	S	St	St	St	S	M	S	St	St	M	St	S
E. C. M.	S	M	S	S	S	S	S	M	S	S	M	M	S	S
W. C. R.	M	M	St	M	St	S	S	S	S	St	M	St	S	S

Indol in the feces.

[S indicates a slight reaction.]

Subject.	Fore period.	First benzoate period.							First after period.	Second benzoate period.				Final after period.
	July.	July.		August.			September.		Sept.	October.				Nov.
	12.	23.	30.	6.	17.	25.	8.	15.	22.	6.	13.	20.	27.	4.
H. H. G.	S	S	0	0	0	0	0	0	0	0	S	0	0	0
W. W. H.	0	0	0	0	0	0	0	0	0	0	S	0	0	0
L. M. L.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J. F. L.	0	S	S	0	0	S	S	0	0	0	S	0	0	0
E. C. M.	S	0	0	0	0	0	0	0	0	0	S	0	0	0
W. C. R.	0	0	0	0	S	0	0	0	0	0	S	0	0	0

Comparison of the data in the two preceding tables shows that there was a slight increase in the amount of phenol detected during the last or high benzoate period. Whether this slight increase in phenol was connected with the large amount of aromatic group introduced associated with the large dosage of sodium benzoate is, of

course, wholly questionable. In any event, considering the length of time the investigation was continued and the normal variations that may naturally arise from time to time, the results taken as a whole for phenol must be regarded as being fairly uniform, and hence as indicating little or no influence on the part of sodium benzoate.

Regarding indol, the only inference from the data presented is that the sodium benzoate was without influence on the amount of indol present in the feces.

As skatol was not present in the feces during any of the periods, no comment on this substance is called for.

Finally, it should be remarked that during the entire investigation the diet of the individual subjects was somewhat low in nitrogen, certainly lower than the usual or average diet, which fact in all probability accounts for the extremely small amounts of the above so-called putrefaction products in the feces of our subjects.

EFFECT ON THE URINE.

Chemical analysis of the twenty-four hours' urine [a] of the individual subjects was made each day throughout the experiment. The only exception to this statement is in connection with hippuric acid, where at certain periods each day's urine was extracted separately, the alcoholic extracts united, and the hippuric acid determined in the mixture. All determinations were made in duplicate, and the figures given in the table of daily records are the average of two closely concordant results.

METHODS OF ANALYSIS.

Total nitrogen was determined by the Kjeldahl-Gunning method.

Urea-nitrogen by Folin's method. (American Journal of Physiology, 1905, vol. 13, p. 45.)

Ammonia-nitrogen by Folin's method. (American Journal of Physiology, 1905, vol. 13, p. 47.)

Purine-nitrogen by the Krüger-Schmid method. (Zeitschrift f. physiologische Chemie, 1905, vol. 45, p. 1.)

Uric acid-nitrogen by the method of Folin. (American Journal of Physiology, 1905, vol. 13, p. 49.)

Hippuric acid-nitrogen by the method of Lewinski. (Archiv für experimentelle Pathologie und Pharmakologie, 1908, vol. lviii, p. 399.)

Creatinine-nitrogen by Folin's method. (American Journal of Physiology, 1905, vol. 13, p. 48.)

Total sulphur by the method of Schulz. (Archiv f. d. gesammte Physiologie, 1907, vol. 120, p. 114.)

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[a] Care was taken to prevent fermentative changes in the day's urine by liberal use of toluol.

Inorganic sulphur and ethereal sulphur by the method of Folin. (Journal of Biological Chemistry, 1905–6, vol. 1, p. 131.)

Neutral sulphur by difference.

Phosphate phosphorus by the uranium nitrate method, with potassium ferrocyanide as indicator.

Chlorine by the Volhard method.

Indican and total acidity by Folin's method. (American Journal of Physiology, 1905, vol. 13, p. 53.)

EFFECT ON VOLUME OF URINE AND SPECIFIC GRAVITY.

Daily fluctuations in the volume of urine and the specific gravity may be studied by examination of the table of daily records. As a better means of comparison, however, we present in the two following tables the average volume of urine per day and the average specific gravity of urine per day for each subject during the seventeen periods of the experiment. Grand averages are likewise shown for each individual covering the fore period, from July 6 to July 19; the first benzoate period, from July 20 to September 20; the first after period, from September 21 to September 30; the second benzoate period, from October 1 to October 28; and the final after period, from October 29 to November 7.

Average volume of urine per day.

Date.	Daily dose of benzoate.	Average volume of urine per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*c. c.*	*c. c.*	*c. c.*	*c. c.*	*c. c.*	*c. c.*
July 6 to 12	0	1,042	1,026	1,022	779	982	1,636
July 13 to 19	0	891	991	966	724	874	1,381
Average		966	1,008	994	751	928	1,508
July 20 to 26	.3	919	1,054	1,064	940	1,088	1,175
July 27 to Aug. 2	.3	1,029	1,041	846	800	881	929
Aug. 3 to 9	.3	1,095	1,084	1,013	873	1,188	999
Aug. 10 to 16	.3	957	1,167	935	934	1,130	1,034
Aug. 17 to 23	.3	1,278	1,126	1,084	1,249	1,139	1,403
Aug. 24 to 30	.3	1,184	1,079	1,166	1,097	1,259	1,504
Aug. 31 to Sept. 6	.3	1,269	1,101	1,076	900	1,406	1,360
Sept. 7 to 13	.3	1,156	1,024	1,100	900	974	1,336
Sept. 14 to 20	.3	1,178	1,123	1,123	1,170	1,077	1,419
Average		1,118	1,088	1,045	985	1,127	1,239
Sept. 21 to 30	0	994	1,065	1,083	1,196	1,036	1,466
Average		994	1,065	1,083	1,196	1,036	1,466
Oct. 1 to 7	.6	986	1,160	1,107	1,280	957	1,521
Oct. 8 to 14	1.0	1,237	1,279	1,087	1,406	1,023	1,496
Oct. 15 to 21	2.0	1,019	1,394	1,004	1,261	1,021	1,597
Oct. 22 to 28	4.0	1,066	1,243	950	1,094	981	1,640
Average		1,077	1,269	1,037	1,260	995	1,563
Oct. 29 to Nov. 7	0	1,092	1,147	1,003	1,211	939	1,519
Average		1,092	1,147	1,003	1,211	939	1,519

Average specific gravity of urine per day.

Date.	Daily dose of benzoate.	Average specific gravity of urine per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.						
July 6 to 12	0	1.024	1.023	1.022	1.025	1.023	1.014
July 13 to 19	0	1.022	1.021	1.022	1.027	1.021	1.017
Average		1.023	1.022	1.022	1.026	1.022	1.015
July 20 to 26	.3	1.020	1.019	1.020	1.024	1.023	1.020
July 27 to Aug. 2	.3	1.017	1.019	1.022	1.026	1.022	1.021
Aug. 3 to 9	.3	1.018	1.017	1.020	1.024	1.019	1.020
Aug. 10 to 16	.3	1.019	1.019	1.021	1.024	1.020	1.020
Aug. 17 to 23	.3	1.016	1.017	1.018	1.019	1.020	1.016
Aug. 24 to 30	.3	1.017	1.018	1.018	1.022	1.019	1.016
Aug. 31 to Sept. 6	.3	1.016	1.019	1.019	1.025	1.019	1.017
Sept. 7 to 13	.3	1.016	1.020	1.020	1.024	1.023	1.018
Sept. 14 to 20	.3	1.016	1.019	1.021	1.022	1.022	1.017
Average		1.017	1.018	1.020	1.023	1.021	1.018
Sept. 21 to 30	0	1.020	1.019	1.020	1.020	1.022	1.016
Average		1.020	1.019	1.020	1.020	1.022	1.016
Oct. 1 to 7	.6	1.021	1.019	1.021	1.020	1.023	1.015
Oct. 8 to 14	1.0	1.018	1.019	1.022	1.019	1.023	1.017
Oct. 15 to 21	2.0	1.021	1.018	1.026	1.021	1.022	1.015
Oct. 22 to 28	4.0	1.018	1.017	1.024	1.021	1.022	1.014
Average		1.020	1.018	1.023	1.020	1.023	1.015
Oct. 29 to Nov. 7	0	1.020	1.020	1.022	1.020	1.023	1.015
Average		1.020	1.020	1.022	1.020	1.023	1.015

Regarding the volume of urine per day, it is to be noted that all the subjects, with the exception of W. C. R., showed some little increase in the volume excreted during the first benzoate period as compared with the fore period. In most instances the increase is not very large. In two cases, namely, H. H. G. and E. C. M., the increase is somewhat conspicuous. The subject W. C. R., however, showed during the first benzoate period a noticeably smaller volume of urine per day as compared with the fore period. Secondly, it is to be noted that in the first after period of ten days the volume of urine dropped to the level of the volume excreted during the fore period in only one instance, namely, H. H. G. In three of the other cases the volume per day in the first after period was greater than during the benzoate period, while two of the subjects, W. W. H. and E. C. M., showed a slight falling off. During the second benzoate period, where the dosage was much larger, the volume per day was increased noticeably in the case of W. C. R. and J. F. L. With E. C. M. the volume fell off. Likewise in the case of L. M. L., when compared with the first benzoate period. Finally, in the last after period it is to be noted that the volume of urine remained essentially unaltered. The differences referred to are not very great, but there is a suggestion of a slight diuretic effect. How far this apparent diuretic effect is to be connected with the specific action of sodium benzoate and how much to other possible causes is to be questioned.

Thus, some consideration must be given, especially in connection with the first benzoate period, to the possible effect of the heat of midsummer in producing increased loss of water from the body with the accompanying increased desire for water, some of which would naturally pass out through the kidneys. That the slightly increased output of urine per day observed is perhaps to be associated with other causes than the benzoate is suggested at least by the fact that the volume of urine did not diminish noticeably in the after periods when no benzoate was taken. Obviously, however, any accurate determination of slight diuretic action would involve careful comparison of all intake of water with the output through different channels.

Regarding the specific gravity of the urine, it is to be observed that during the first benzoate period the specific gravity of the urine, with the exception of the subject W. C. R., was somewhat lower than in the fore period. This is in harmony with the increase in volume. Subject W. C. R. showed an average specific gravity during the first benzoate period of 1.018, as contrasted with 1.015 of the fore period. The volume of urine with this subject averaged 1,239 c. c. during the first benzoate period, as contrasted with 1,508 c. c. in the fore period. The change in specific gravity of the urine in all the subjects during the first benzoate period is to be ascribed solely to the slight changes in volume. During the second benzoate period the specific gravity suffered little change. In fact, it is quite apparent that the solid matters of the urine were not altered in amount under the influence of sodium benzoate, since the specific gravity remained essentially the same, except so far as it underwent slight modification incidental to the small changes in volume.

EFFECT ON TOTAL NITROGEN.

The output of total nitrogen in the urine is best compared by studying the grand averages for each individual during the fore period, the first benzoate period, and the four subsequent periods. The following table gives the average output of total nitrogen per day for the six subjects during the seventeen weekly and ten-day periods, with the grand averages already referred to. Examination of the data shows that with the subjects H. H. G., W. W. H., L. M. L. and E. C. M. the total nitrogen of the fore period was in excess of that excreted during any of the later periods. The somewhat high total nitrogen output of the four subjects during the fore period is to be attributed to the larger intake of nitrogen from July 6 to July 26. This fact has already been commented upon in another connection, but it needs special consideration here, since it is well known that the nitrogen output runs more or less parallel with the nitrogen intake. In these four subjects the somewhat larger intake during this fore period was especially noticeable, and it is on this account that the

average daily nitrogen output of the four subjects in question is relatively high. In attempting to ascertain whether sodium benzoate exerts any influence upon the output of total nitrogen through the urine, it will be well to note particularly the average daily output of nitrogen on the periods subsequent to July 26. If, for example, comparison is made of the grand averages for the first benzoate period, the first after period, the second benzoate period, and the final after period, it will be seen that there is practically little or no change in the average output of nitrogen in any of the subjects. Somewhat striking, indeed, is the close agreement between the averages for the first benzoate period and the second benzoate period as compared with that of the first after period. Thus, in the case of H. H. G. the grand average for the first benzoate period was 8.68 grams of nitrogen per day; for the second benzoate period 8.64 grams of nitrogen per day; while for the period in between it was 8.53 grams of nitrogen per day. Again, in the case of L. M. L. the average output of nitrogen per day during the first benzoate period was 9.47 grams; for the first after period 9.43 grams; for the second benzoate period 9.42 grams. Still again, in the case of E. C. M. the average output of nitrogen per day during the first benzoate period covering two months was 9.82 grams; during the first after period 9.83 grams; during the second benzoate period of a month 9.43 grams. It is perfectly obvious, therefore, that sodium benzoate in the doses taken by our subjects does not affect the output of total nitrogen through the urine where the nitrogen intake remains essentially the same.

Date.	Daily dose of benzoate.	Average amount of total nitrogen per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 12	0	12.59	12.57	12.11	10.39	12.46	9.93
July 13 to 19	0	10.09	11.06	11.27	9.49	10.27	8.70
Average		11.34	11.81	11.69	9.94	11.36	9.31
July 20 to 26	.3	9.85	10.14	11.74	9.12	11.15	8.35
July 27 to Aug. 2	.3	9.49	9.16	9.74	8.86	9.49	7.31
Aug. 3 to 9	.3	8.27	9.27	9.53	8.95	9.55	7.98
Aug. 10 to 16	.3	8.83	9.68	9.22	9.13	9.94	8.42
Aug. 17 to 23	.3	8.56	8.22	8.18	8.78	9.51	7.95
Aug. 24 to 30	.3	8.10	7.76	9.03	9.43	9.40	8.74
Aug. 31 to Sept. 6	.3	7.99	7.74	8.58	8.81	9.72	7.84
Sept. 7 to 13	.3	8.42	7.88	9.32	9.06	9.57	8.13
Sept. 14 to 20	.3	8.64	9.24	9.89	10.00	10.08	8.76
Average		8.68	8.78	9.47	9.12	9.82	8.16
Sept. 21 to 30	0	8.53	8.35	9.43	10.01	9.83	8.58
Average		8.53	8.35	9.43	10.01	9.83	8.58
Oct. 1 to 7	.5	8.54	8.65	9.75	10.19	9.68	9.30
Oct. 8 to 14	1.0	8.44	8.39	9.66	10.19	9.34	8.74
Oct. 15 to 21	2.0	8.74	9.03	9.21	9.92	9.59	8.28
Oct. 22 to 28	4.0	8.87	8.91	9.08	9.49	9.13	9.06
Average		8.64	8.74	9.42	9.94	9.43	8.84
Oct. 29 to Nov. 7	0	9.27	8.88	9.85	9.38	9.62	9.21
Average		9.27	8.88	9.85	9.38	9.62	9.21

EFFECT ON THE UREA-NITROGEN.

Urea, more than any other one nitrogenous component of the urine, fluctuates in harmony with the amount of protein food ingested. Consequently, it is to be expected that the urea-nitrogen will show the same relatively high figure during the fore period in those subjects whose intake of nitrogen was high during the first two or three weeks of the experiment. In harmony with this view, it is to be noted that the average daily output of urea-nitrogen in the four subjects, H. H. G., W. W. H., L. M. L., and E. C. M., is comparatively high for the fore period.

The accompanying table, giving the amount of urea-nitrogen per day during the various periods of the experiment, shows that aside from these four high figures there is practically no change whatever in the average daily output of urea-nitrogen for any of the subjects in the different periods of the experiment. In other words, it is quite apparent from the figures presented that the urea-nitrogen excreted through the kidneys is not influenced in any degree by the ingestion of sodium benzoate.

Date.	Daily dose of benzoate.	Average amount of urea-nitrogen per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 12	0	10.76	10.76	10.10	8.37	10.32	8.16
July 13 to 19	0	8.56	9.51	9.53	7.63	8.50	7.17
Average		9.66	10.13	9.81	8.00	9.41	7.66
July 20 to 26	.3	8.29	8.73	9.94	7.16	9.40	6.88
July 27 to Aug. 2	.3	8.05	7.78	8.12	7.06	7.84	6.11
Aug. 3 to 9	.3	6.78	7.99	7.82	7.04	7.95	6.61
Aug. 10 to 16	.3	7.45	8.36	7.72	7.35	8.41	7.15
Aug. 17 to 23	.3	7.20	6.93	6.71	6.99	7.84	6.64
Aug. 24 to 30	.3	6.79	6.48	7.46	7.60	7.76	7.50
Aug. 31 to Sept. 6	.3	6.56	6.51	7.10	7.12	8.11	6.62
Sept. 7 to 13	.3	7.12	6.65	7.87	7.34	8.14	6.94
Sept. 14 to 20	.3	7.12	7.84	8.29	8.22	8.41	7.44
Average		7.26	7.47	7.89	7.32	8.20	6.87
Sept. 21 to 30	0	7.18	7.10	7.98	8.30	8.24	7.30
Average		7.18	7.10	7.98	8.30	8.24	7.30
Oct. 1 to 7	.6	7.04	7.32	8.13	8.41	7.96	7.86
Oct. 8 to 14	1.0	6.96	7.04	7.97	8.37	7.63	7.34
Oct. 15 to 21	2.0	7.16	7.55	7.52	7.88	7.70	6.78
Oct. 22 to 28	4.0	7.04	7.13	7.23	7.42	7.24	7.40
Average		7.05	7.26	7.71	8.02	7.63	7.34
Oct. 29 to Nov. 7	0	7.80	7.43	8.30	7.67	7.98	7.70
Average		7.80	7.43	8.30	7.67	7.98	7.70

EFFECT ON AMMONIA-NITROGEN.

The table herewith presented, showing the average daily amount of ammonia-nitrogen excreted by the individual subjects during the different periods of the experiment, indicates quite plainly that this form of nitrogen is not influenced by sodium benzoate in the doses

used in our experiment. The averages—except, as with the previous forms of nitrogen, the relatively high ammonia yield in the fore period owing to the larger intake of protein food—are in such close agreement that it is plain no specific effect in this direction can be attributed to sodium benzoate.

Date.	Daily dose of benzoate.	Average amount of ammonia-nitrogen per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.48	0.44	0.52	0.61	0.57	0.51
July 13 to 19	0	.44	.44	.45	.56	.54	.47
Average		.46	.44	.48	.58	.55	.49
July 20 to 26	.3	.40	.39	.49	.58	.51	.46
July 27 to Aug. 2	.3	.40	.35	.46	.52	.51	.33
Aug. 3 to 9	.3	.37	.34	.41	.56	.48	.34
Aug. 10 to 16	.3	.35	.30	.37	.53	.42	.33
Aug. 17 to 23	.3	.27	.23	.29	.45	.40	.28
Aug. 24 to 30	.3	.32	.29	.32	.51	.41	.30
Aug. 31 to Sept. 6	.3	.34	.28	.35	.45	.40	.27
Sept. 7 to 13	.3	.36	.31	.35	.52	.41	.30
Sept. 14 to 20	.3	.41	.35	.36	.51	.47	.36
Average		.36	.31	.37	.51	.45	.33
Sept. 21 to 30	0	.35	.32	.34	.47	.45	.35
Average		.35	.32	.34	.47	.45	.35
Oct. 1 to 7	.6	.39	.36	.40	.55	.52	.41
Oct. 8 to 14	1.0	.42	.33	.43	.55	.49	.38
Oct. 15 to 21	2.0	.37	.31	.41	.48	.48	.38
Oct. 22 to 28	4.0	.41	.37	.39	.51	.49	.40
Average		.40	.34	.40	.52	.49	.39
Oct. 29 to Nov. 7	0	.37	.33	.36	.47	.48	.40
Average		.37	.33	.36	.47	.48	.40

EFFECT ON PURINE-NITROGEN.

The daily fluctuation in the purine-nitrogen of the individual subjects is seen from the daily charts. In the appended table, however, are shown the figures for the average daily content of this form of nitrogen during the seventeen periods of the experiment, with the grand averages for the fore period, benzoate periods, and after periods. Examination of the data shows that for some reason (presumably the larger proportion of meat in the diet) the excretion of purine-nitrogen per day is greater during the fore period than in any of the later periods. From July 20, the beginning of the first benzoate period, to the end of the second benzoate period there is very little change per day in the excretion of this form of nitrogen. The average daily excretion during the first benzoate period and during the first after period is almost identical, and with one exception the same is true for the daily average excretion during the second benzoate period. It is thus apparent that sodium benzoate does not have any tangible effect upon the output of purine-nitrogen. The only fact that would in any sense stand opposed to this conclusion is the relatively small

average output of purine-nitrogen per day during the final after period. It might be said, for example, that in the final after period the purine-nitrogen excretion drops off because of cessation in the dosage of benzoate. If this were the case, a similar result would naturally be expected in the first after period. This, however, the data show is not the case. There is no indication, except possibly in the case of W. W. H., of any marked tendency on the part of sodium benzoate toward changing noticeably the excretion of purine-nitrogen. We must conclude that the excretion of this form of nitrogen through the urine is not materially modified by the ingestion of sodium benzoate in the doses made use of in our experiment.

Date.	Daily dose of benzoate.	Average amount of purine-nitrogen per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.067	0.045	0.055	0.082	0.056	0.085
July 13 to 19	0	.049	.018	.045	.042	.038	.057
Average		.058	.031	.050	.062	.047	.071
July 20 to 26	.3	.040	.013	.033	.039	.027	.045
July 27 to Aug. 2	.3	.029	.006	.030	.057	.040	.039
Aug. 3 to 9	.3	.049	.021	.034	.066	.051	.057
Aug. 10 to 16	.3	.039	.017	.043	.059	.031	.044
Aug. 17 to 23	.3	.038	.028	.031	.054	.030	.047
Aug. 24 to 30	.3	.035	.018	.031	.048	.031	.036
Aug. 31 to Sept. 6	.3	.045	.020	.031	.046	.019	.037
Sept. 7 to 13	.3	.043	.016	.033	.029	.027	.034
Sept. 14 to 20	.3	.047	.009	.035	.053	.023	.043
Average		.040	.016	.033	.050	.031	.042
Sept. 21 to 30	0	.047	.020	.037	.053	.038	.042
Average		.047	.020	.037	.053	.038	.042
Oct. 1 to 7	.6	.043	.011	.044	.051	.024	.044
Oct. 8 to 14	1.0	.035	.013	.031	.037	.024	.034
Oct. 15 to 21	2.0	.025	.009	.029	.026	.016	.029
Oct. 22 to 28	4.0	.035	.011	.026	.037	.025	.035
Average		.034	.011	.032	.037	.025	.035
Oct. 29 to Nov. 7	0	.025	.006	.016	.024	.017	.017
Average		.025	.006	.016	.024	.017	.017

EFFECT ON URIC ACID-NITROGEN.

The accompanying table, giving the average daily output of uric acid-nitrogen during the different periods of the experiment, shows quite plainly that the excretion of this form of nitrogen is not changed in any degree by the sodium benzoate taken. Somewhat noticeable, indeed, is the close agreement in the average daily output of uric acid-nitrogen during the first benzoate period and during the second benzoate period in the case of the subject H. H. G., as well as in E. C. M., W. C. R., and L. M. L. In fact, the data speak for themselves quite clearly, that sodium benzoate is without effect upon the excretion of uric acid.

Date.	Daily dose of benzoate.	Average amount of uric acid-nitrogen per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.147	0.201	0.199	0.162	0.204	0.153
July 13 to 19	0	.166	.191	.199	.168	.200	.142
Average		.156	.196	.199	.165	.202	.147
July 20 to 26	.3	.146	.192	.208	.174	.209	.150
July 27 to Aug. 2	.3	.146	.183	.211	.158	.181	.160
Aug. 3 to 9	.3	.124	.185	.203	.155	.181	.160
Aug. 10 to 16	.3	.141	.183	.184	.166	.200	.153
Aug. 17 to 23	.3	.143	.174	.188	.175	.193	.163
Aug. 24 to 30	.3	.135	.167	.200	.185	.198	.158
Aug. 31 to Sept. 6	.3	.128	.167	.184	.163	.205	.148
Sept. 7 to 13	.3	.148	.175	.213	.203	.198	.157
Sept. 14 to 20	.3	.148	.188	.196	.172	.211	.155
Average		.140	.179	.198	.172	.197	.156
Sept. 21 to 30	0	.134	.167	.182	.156	.187	.147
Average		.134	.167	.182	.156	.187	.147
Oct. 1 to 7	.6	.142	.189	.204	.164	.197	.158
Oct. 8 to 14	1.0	.142	.186	.211	.166	.192	.146
Oct. 15 to 21	2.0	.152	.193	.214	.177	.205	.157
Oct. 22 to 28	4.0	.127	.172	.182	.164	.184	.160
Average		.140	.185	.203	.168	.194	.155
Oct. 29 to Nov. 7	0	.146	.189	.200	.168	.205	.171
Average		.146	.189	.200	.168	.205	.171

EFFECT ON CREATININE-NITROGEN.

The accompanying table, showing the average daily excretion of creatinine-nitrogen for the individual subjects during the seventeen periods of the experiment, makes it quite clear that here likewise there is no influence exerted by sodium benzoate which can be noted. The figures giving the grand averages for the fore period, first benzoate period, first after period, second benzoate period, etc., with the different subjects, are so closely alike that the conclusion above is thoroughly justified by the results.

Date.	Daily dose of benzoate.	Average amount of creatinine-nitrogen per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.451	0.490	0.626	0.611	0.554	0.458
July 13 to 19	0	.445	.505	.624	.606	.568	.463
Average		.448	.497	.625	.608	.561	.460
July 20 to 26	.3	.464	.517	.608	.639	.570	.466
July 27 to Aug. 2	.3	.456	.513	.608	.643	.564	.478
Aug. 3 to 9	.3	.463	.514	.611	.649	.558	.486
Aug. 10 to 16	.3	.472	.512	.601	.658	.577	.488
Aug. 17 to 23	.3	.464	.508	.596	.624	.575	.501
Aug. 24 to 30	.3	.457	.502	.596	.635	.560	.483
Aug. 31 to Sept. 6	.3	.496	.510	.594	.648	.573	.490
Sept. 7 to 13	.3	.482	.517	.607	.649	.577	.495
Sept. 14 to 20	.3	.476	.510	.605	.655	.590	.496
Average		.466	.511	.603	.622	.571	.487
Sept. 21 to 30	0	.487	.516	.609	.652	.598	.500
Average		.487	.516	.609	.652	.598	.500

Date.	Daily dose of benzoate.	Average amount of creatinine-nitrogen per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
Oct. 1 to 7	0.6	0.488	0.530	0.612	0.664	0.617	0.526
Oct. 8 to 14	1.0	.493	.537	.629	.671	.614	.515
Oct. 15 to 21	2.0	.494	.526	.613	.648	.592	.515
Oct. 22 to 28	4.0	.477	.513	.593	.646	.569	.493
Average		.488	.526	.612	.657	.598	.512
Oct. 29 to Nov. 7	0	.482	.532	.606	.647	.584	.508
Average		.482	.532	.606	.647	.584	.508

EFFECT ON HIPPURIC ACID-NITROGEN.

In considering the effect on the excretion of hippuric acid-nitrogen it is to be remembered that hippuric acid is not wholly, at least, a product of ordinary protein katabolism. The appearance of hippuric acid in the urine is dependent in large measure upon the amount of benzoyl-containing substances introduced into the system. The other factor contributing to the production of hippuric acid is the amount of glycocoll available in the system. Under ordinary conditions of body metabolism there is always a sufficient amount of glycocoll present to combine with any ordinary amount of a benzoyl-containing radical to make hippuric acid, this acid being benzoyl-glycocoll. In view of these facts, it is obvious that the taking of sodium benzoate will naturally be followed by an increase in the amount of hippuric acid-nitrogen contained in the day's urine. Hippuric acid-nitrogen was not determined each day of the experiment, as already noted, but sufficient data are available to construct a table showing in a general way the average daily output of hippuric acid-nitrogen for different periods of the experiment. The table appended shows that during the first benzoate period the average daily output of hippuric acid-nitrogen was in some cases lower than the average daily output in the fore period, while in other cases the increase was so slight as to be hardly noticeable. This is due to variations in the character of the food. It is a significant fact, having bearing upon the present experiment, that the excretion of hippuric acid in the urine can be easily increased or decreased by modifying the diet. If it is desired to increase the hippuric acid output it is simply necessary to eat fruits, such as cranberries, huckleberries, plums, and other articles rich in benzoyl radicals, in which case the output of hippuric acid in the urine is increased. In the fore period on some days a diet intentionally designed to give a high hippuric acid yield was prescribed, and it is significant that the average output of hippuric acid during this fore period was in many cases as great as in the first benzoate period, when 0.3 gram of sodium

benzoate was given daily. In the first after period it is to be noted that there is a little drop in the output of hippuric acid-nitrogen as compared with that of the first benzoate period. In the second benzoate period, where the dosage was large, the average daily output of hippuric acid-nitrogen was correspondingly increased. Somewhat noticeable is the fact that in the final after period the excretion of hippuric acid-nitrogen still continued high, showing a tendency for the benzoate to lag. In some cases, indeed, notably in H. H. G. and W. W. H., the average output per day was greater in the final after period than during the benzoate period. In conclusion then it may be stated that sodium benzoate, in harmony with well-known physiological facts, did in all these subjects, when the dosage was sufficiently large, give rise to an increased output of hippuric acid-nitrogen. This, however, is not to be interpreted as implying a disturbance of the nitrogen metabolism of the body by sodium benzoate, but is simply a measure of the combination of the benzoyl radical taken with the preexistent glycocoll.

Date.	Daily dose of benzoate.	Average amount of hippuric acid-nitrogen per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.064	0.054	0.051	0.046	0.066	0.054
July 13 to 19	0						
Average		.064	.054	.051	.046	.066	.054
July 20 to 26	.3	.029	.021	.022	.027	.018	.025
July 27 to Aug. 2	.3						
Aug. 3 to 9	.3						
Aug. 10 to 16	.3	.026	.058	.077	.070	.060	.050
Aug. 17 to 23	.3						
Aug. 24 to 30	.3	.051	.045	.057	.061	.070	.057
Aug. 31 to Sept. 6	.3	.041	.068	.052	.064	.071	.086
Sept. 7 to 13	.3	.034	.038	.036	.039	.037	.055
Sept. 14 to 20	.3	.072	.032	.104	.094	.089	.092
Average		.042	.043	.058	.059	.057	.061
Sept. 21 to 30	0	.037	.023	.027	.038	.054	.048
Average		.037	.023	.027	.038	.054	.048
Oct. 1 to 7	.6	.063	.050	.071	.061	.050	.032
Oct. 8 to 14	1.0	.065	.067	.099	.085	.090	.081
Oct. 15 to 21	2.0	.171	.156	.169	.221	.154	.187
Oct. 22 to 28	4.0	.260	.230	.380	.392	.361	.378
Average		.139	.126	.179	.189	.164	.169
Oct. 29 to Nov. 7	0	.170	.190	.190	.179	.150	.130
Average		.170	.190	.190	.170	.150	.130

EFFECT ON THE DISTRIBUTION OF NITROGEN.

So far, we have confined our attention in referring to the different forms of nitrogen excreted through the urine to the average daily output in grams. We may next advantageously consider how far sodium benzoate tends to disturb the average distribution of nitrogen,

i. e., how far the percentages of the different forms of nitrogen figured on the total nitrogen are changed. In the tables showing the distribution of nitrogen and sulphur in the urine, will be found the daily percentages of the different forms of nitrogen for each individual. For comparison, however, tables are appended for each subject giving the daily average distribution of nitrogen for the different periods, together with the grand averages for the fore period; first benzoate period; first after period; second benzoate period; and the final after period. As is well known, about 85 per cent of the total nitrogen of the urine is ordinarily in the form of urea. This percentage, however, is dependent in a measure upon the amount of protein food taken.

Comparison of the six tables following shows that in the first benzoate period the percentage of urea-nitrogen, i. e., the percentage of urea-nitrogen figured on the total nitrogen, is not essentially different from that of the fore period. In the case of W. W. H. and L. M. L. there is a slight decline, whereas in E. C. M. and W. C. R. there is a slight rise. These differences, however, are not sufficiently marked to have any significance. What is conspicuous, however, is the somewhat noticeable drop in the percentage of urea in all the subjects, with the exception of J. F. L., during the second benzoate period. At first glance this might be attributed to some specific action on the part of sodium benzoate. A little thought, however, will show that this does not necessarily follow. During the second benzoate period the daily intake of the benzoyl-containing radical was fairly large, and there resulted a correspondingly large increase in the output of hippuric acid. In other words, the ingested benzoic acid combined with the requisite amount of glycocoll and was excreted through the urine as hippuric acid. In the absence of the benzoic acid radical the glycocoll would have been decomposed into urea. The slight decrease in the output of urea during the second benzoate period, therefore, was not due to any diminution in the amount of this form of nitrogen, but simply to the withdrawal of a certain amount of glycocoll which was eliminated as hippuric acid, thus escaping conversion into urea.

Daily average distribution of nitrogen.

[Percentages of total nitrogen.]

SUBJECT H. H. G.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
	Grams.							
July 6 to 12	0	85.4	3.8	0.5	1.1	3.5	0.4	5.3
July 13 to 19	0	85.0	4.3	.5	1.6	4.4	....	4.2
Average	....	85.2	4.1	.5	1.4	4.0	.4	4.8
July 20 to 26	.3	84.2	4.0	.4	1.4	4.7	.3	5.0
July 27 to Aug. 2	.3	84.8	4.2	.3	1.5	4.8	....	4.4
Aug. 3 to 9	.3	82.0	4.4	.6	1.4	5.5	....	5.6
Aug. 10 to 16	.3	84.5	3.9	.4	1.6	5.3	.3	4.1

Daily average distribution of nitrogen—Continued.

[Percentages of total nitrogen.]

SUBJECT H. H. G.—Continued.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
	Grams.							
Aug. 17 to 23	0.3	84.2	3.1	0.4	1.6	5.4	....	5.2
Aug. 24 to 30	.3	83.7	3.9	.4	1.6	5.5	0.6	4.7
Aug. 31 to Sept. 6	.3	82.2	4.2	.5	1.6	5.8	.5	6.1
Sept. 7 to 13	.3	84.5	4.2	.5	1.7	5.7	.4	3.0
Sept. 14 to 20	.3	82.5	4.7	.5	1.7	5.5	.8	5.1
Average	....	83.6	4.1	.4	1.6	5.3	.5	4.8
Sept. 21 to 30	0	84.3	4.1	.5	1.5	5.7	.4	3.9
Average	....	84.3	4.1	.5	1.5	5.7	.4	3.9
Oct. 1 to 7	.6	82.4	4.5	.5	1.6	5.7	.7	5.1
Oct. 8 to 14	1.0	82.6	4.9	.4	1.6	5.8	.7	4.7
Oct. 15 to 21	2.0	82.0	4.2	.2	1.7	5.6	1.9	6.1
Oct. 22 to 28	4.0	79.3	4.6	.4	1.4	5.4	2.9	8.7
Average	....	81.6	4.5	.4	1.5	5.6	1.5	6.1
Oct. 29 to Nov. 7	0	84.1	3.9	.2	1.5	5.1	1.8	4.8
Average	....	84.1	3.9	.2	1.5	5.1	1.8	4.8

SUBJECT W. W. H.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
July 6 to 12	0	85.6	3.5	0.3	1.6	3.9	0.4	4.8
July 13 to 19	0	86.0	3.9	.2	1.7	4.5	....	3.5
Average	....	85.8	3.7	.2	1.7	4.2	.4	4.1
July 20 to 26	.3	86.1	3.6	.13	1.8	5.1	.2	3.0
July 27 to Aug. 2	.3	84.9	3.8	.006	2.0	5.5	....	3.5
Aug. 3 to 9	.3	86.1	3.6	.1	1.9	5.5	....	2.7
Aug. 10 to 16	.3	86.4	3.0	.1	1.8	5.2	.5	3.2
Aug. 17 to 23	.3	84.3	2.7	.3	2.1	6.1	....	4.2
Aug. 24 to 30	.3	83.4	3.7	.3	2.1	6.4	.5	4.2
Aug. 31 to Sept 6	.3	83.3	3.6	.3	2.1	6.6	.9	4.4
Sept. 7 to 13	.3	84.4	3.9	.2	2.2	6.5	.4	2.5
Sept. 14 to 20	.3	84.8	3.7	.1	2.0	5.5	.3	3.8
Average	....	84.8	3.5	.17	2.0	5.8	.4	3.5
Sept. 21 to 30	0	85.0	3.8	.2	2.0	6.1	.2	2.5
Average	....	85.0	3.8	.2	2.0	6.1	.2	2.5
Oct. 1 to 7	.6	84.6	4.1	.1	2.1	6.1	.5	2.8
Oct. 8 to 14	1.0	83.8	3.9	.2	2.2	6.4	.8	3.9
Oct. 15 to 21	2.0	83.7	3.4	.1	2.1	5.8	1.7	5.7
Oct. 22 to 28	4.0	80.0	4.1	.1	1.9	5.7	2.6	8.2
Average	....	83.0	3.9	.1	2.1	6.0	1.4	5.1
Oct. 29 to Nov. 7	0	83.6	3.7	.06	2.1	5.8	1.9	4.4
Average	....	83.6	3.7	.06	2.1	5.8	1.9	4.4

SUBJECT L. M. L.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
July 6 to 12	0	83.4	4.2	0.4	1.6	5.2	0.4	5.1
July 13 to 19	0	84.6	3.9	.4	1.7	5.5	....	3.7
Average	....	84.0	4.1	.4	1.7	5.3	.4	4.4
July 20 to 26	.3	84.6	4.1	.3	1.7	5.1	.2	3.7
July 27 to Aug. 2	.3	83.4	4.7	.3	2.1	6.2	....	3.1
Aug. 3 to 9	.3	82.2	4.3	.3	2.0	6.4	....	4.7
Aug. 10 to 16	.3	83.7	4.0	.4	1.9	6.5	.7	3.3
Aug. 17 to 23	.3	82.1	3.5	.3	2.3	7.2	....	4.5
Aug. 24 to 30	.3	82.7	3.5	.3	2.2	5.6	.6	4.7
Aug. 31 to Sept. 6	.3	82.7	4.0	.3	2.1	5.9	.6	3.6

Daily average distribution of nitrogen—Continued.

[Percentages of total nitrogen.]

SUBJECT L. M. L.—Continued.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
	Grams.							
Sept. 7 to 13	0.3	84.4	3.7	0.3	2.2	6.5	0.3	2.9
Sept. 14 to 20	.3	83.8	3.6	.3	1.9	6.1	1.0	4.0
Average	....	83.3	3.9	.3	2.0	6.2	.6	3.8
Sept. 21 to 30	0	84.7	3.6	.4	1.9	6.4	.2	2.8
Average	....	84.7	3.6	.4	1.9	6.4	.2	2.8
Oct. 1 to 7	.6	83.4	4.1	.4	2.0	6.2	.7	3.7
Oct. 8 to 14	1.0	82.6	4.4	.3	2.1	6.5	1.0	3.9
Oct. 15 to 21	2.0	81.7	4.4	.3	2.3	6.6	1.8	4.6
Oct. 22 to 28	4.0	79.6	4.2	.2	2.0	6.5	4.1	7.1
Average	....	81.8	4.2	.3	2.1	6.4	1.9	4.8
Oct. 29 to Nov. 7	0	84.4	3.6	.1	2.0	6.1	1.9	3.8
Average	....	84.4	3.6	.1	2.0	6.1	1.9	3.8

SUBJECT J. F. L.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
July 6 to 12	0	80.5	5.9	0.8	1.5	5.9	0.4	4.9
July 13 to 19	0	80.4	5.9	.4	1.7	6.3	....	5.0
Average	....	80.4	5.9	.6	1.6	6.1	.4	4.9
July 20 to 26	.3	78.6	6.3	.4	1.9	7.0	.2	5.5
July 27 to Aug. 2	.3	79.6	5.8	.6	1.7	7.2	....	4.8
Aug. 3 to 9	.3	78.4	6.2	.7	1.7	7.2	....	5.3
Aug. 10 to 16	.3	80.6	5.8	.6	1.8	7.2	.7	4.0
Aug. 17 to 23	.3	80.0	5.1	.6	2.0	5.9	....	5.5
Aug. 24 to 30	.3	80.6	5.4	.5	1.9	6.7	.5	4.3
Aug. 31 to Sept. 6	.3	80.6	5.1	.5	1.8	7.2	.7	4.3
Sept. 7 to 13	.3	80.8	5.7	.3	2.2	7.1	.4	3.5
Sept. 14 to 20	.3	82.2	5.1	.5	1.7	6.5	.9	4.0
Average	....	80.2	5.6	.5	1.8	6.9	.6	4.6
Sept. 21 to 30	0	83.0	4.7	.5	1.6	6.5	.3	3.7
Average	....	83.0	4.7	.5	1.6	6.5	.3	3.7
Oct. 1 to 7	.6	82.6	5.4	.5	1.6	6.5	.6	3.4
Oct. 8 to 14	1.0	82.3	5.4	.3	1.6	6.5	.8	3.9
Oct. 15 to 21	2.0	80.7	4.8	.2	1.7	6.5	2.2	5.7
Oct. 22 to 28	4.0	78.3	5.3	.4	1.7	6.8	4.1	7.4
Average	....	80.9	5.2	.3	1.6	6.5	1.9	5.1
Oct. 29 to Nov. 7	0	82.0	5.0	.2	1.7	5.8	1.7	4.1
Average	....	82.0	5.0	.2	1.7	5.8	1.7	4.1

SUBJECT E. C. M.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
July 6 to 12	0	82.8	4.5	0.4	1.6	4.5	0.5	5.5
July 13 to 19	0	82.7	5.2	.4	1.9	5.5	....	4.0
Average	....	82.7	4.8	.4	1.8	5.0	.5	4.7
July 20 to 26	.3	84.4	4.5	.2	1.8	5.1	.1	3.8
July 27 to Aug. 2	.3	82.6	5.3	.4	1.9	5.9	....	3.8
Aug. 3 to 9	.3	83.3	5.0	.5	1.8	5.8	....	3.6
Aug. 10 to 16	.3	84.5	4.2	.3	2.0	5.8	.5	3.2
Aug. 17 to 23	.3	82.4	4.2	.3	2.0	6.0	....	5.0
Aug. 24 to 30	.3	82.6	4.3	.3	2.1	5.9	.6	4.7
Aug. 31 to Sept. 6	.3	83.5	4.1	.2	2.0	5.8	.7	4.4
Sept. 7 to 13	.3	85.0	4.2	.2	2.0	6.0	.3	2.4
Sept. 14 to 20	.3	83.6	4.6	.2	2.1	5.8	.8	3.7
Average	....	83.5	4.5	.3	1.9	5.8	.5	3.8

Daily average distribution of nitrogen—Continued.

[Percentages of total nitrogen.]

SUBJECT E. C. M.—Continued.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
	Grams.							
Sept. 21 to 30	0	83.8	4.5	0.3	1.9	6.1	0.5	3.0
Average		83.8	4.5	.3	1.9	6.1	.5	3.0
Oct. 1 to 7	.6	82.3	5.3	.2	2.0	6.3	.5	3.7
Oct. 8 to 14	1.0	81.7	5.2	.2	2.0	6.5	.9	4.1
Oct. 15 to 21	2.0	80.6	5.0	.1	2.1	6.2	1.6	6.2
Oct. 22 to 28	4.0	79.4	5.3	.2	2.0	6.2	3.9	7.0
Average		81.0	5.2	.2	2.0	6.3	1.7	5.2
Oct. 29 to Nov. 7	0	82.8	4.9	.1	2.1	6.0	1.5	4.5
Average		82.8	4.9	.1	2.1	6.0	1.5	4.5

SUBJECT W. C. R.

Date.	Daily dose benzoate.	Urea-nitrogen.	Ammonia-nitrogen.	Purine-nitrogen.	Uric acid-nitrogen.	Creatinine-nitrogen.	Hippuric acid-nitrogen.	Undetermined nitrogen.
July 6 to 12	0	83.3	5.0	0.8	1.5	4.6	0.5	4.7
July 13 to 19	0	82.4	5.4	.6	1.6	5.3		4.7
Average		82.8	5.2	.7	1.6	5.0	.5	4.7
July 20 to 26	.3	82.5	5.5	.5	1.7	5.5	.3	5.7
July 27 to Aug. 2	.3	83.6	4.5	.5	2.1	6.5		2.8
Aug. 3 to 9	.3	82.8	4.2	.7	2.0	6.0		4.2
Aug. 10 to 16	.3	84.8	3.9	.5	1.8	5.7	.6	3.3
Aug. 17 to 23	.3	83.4	3.5	.6	2.0	6.3		4.2
Aug. 24 to 30	.3	85.7	3.4	.4	1.8	5.5	.6	2.9
Aug. 31 to Sept. 6	.3	84.6	3.3	.5	1.8	6.2	1.0	3.0
Sept. 7 to 13	.3	85.4	3.6	.4	1.9	6.1	.6	2.5
Sept. 14 to 20	.3	85.0	4 1	.4	1.7	5.6	1.0	3.0
Average		84.2	4.0	.5	1.8	5.9	.7	3.5
Sept. 21 to 30	0	85.1	4.0	.5	1.7	5.8	.5	2.9
Average		85.1	4.0	.5	1.7	5.8	.5	2.9
Oct. 1 to 7	.6	84.6	4.4	.4	1.7	5.6	.3	3.1
Oct. 8 to 14	1.0	84.0	4.3	.4	1.6	5.8	.9	3.7
Oct. 15 to 21	2.0	82.0	4.5	.3	1.9	6.2	2.2	5.1
Oct. 22 to 28	4.0	81.6	4.4	.3	1.7	5.4	4.1	6.2
Average		83.0	4.4	.3	1.7	5.7	1.9	4.5
Oct. 29 to Nov. 7	0	83.6	4.3	.1	1.8	5.5	1.4	4.6
Average		83.6	4.3	.1	1.8	5.5	1.4	4.6

Careful scrutiny of the figures for the percentages of ammonia-nitrogen, purine-nitrogen, uric acid-nitrogen, and creatinine-nitrogen shows no marked variation during the different periods of the experiment. Slight fluctuations do appear here and there, but they are not sufficiently marked or regular to have any special importance. There is, possibly in the case of L. M. L. and W. W. H., a tendency for the percentage of creatinine-nitrogen to increase somewhat during the later stages of the experiment. This increase, however, is not large and can not have, it is thought, any particular significance.

EFFECT ON TOTAL SULPHUR.

The daily excretion of sulphur through the urine is recorded in the tables giving the daily record of the individual subjects. Here, however, we have arranged, in tabular form, the daily average output of total sulphur for the various subjects during the seventeen periods of the experiment, with the grand averages for the fore period, benzoate periods, etc. As is well known, there is ordinarily a certain definite relationship between the extent of protein metabolism and the output of sulphur, since considerable of the sulphur of the excretion comes from the breaking down of protein. In view of these facts, therefore, we should expect during the fore period, in harmony with the larger intake of protein food and the corresponding increase in protein metabolism, a larger output of total sulphur than in the subsequent periods. This is what the figures in the appended table show in practically all of the subjects. During the first benzoate period the average daily output of total sulphur for J. F. L., for example, was 0.702 gram. During the first after period the average daily output was 0.712 gram; during the second benzoate period 0.689 gram; and in the final after period 0.691 gram. As is seen, these figures, which are more or less generally duplicated in the other subjects, show very little difference. There is perhaps a slight tendency for the sulphur output to diminish somewhat during the benzoate periods. The differences, however, are so small as to have little significance. So far as total sulphur is concerned, therefore, we are not disposed to ascribe any noticeable effect on the part of sodium benzoate.

Date.	Daily dose of benzoate.	Average amount of total sulphur per day.					
		H. H. G	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.927	0.882	0.864	0.800	0.908	0.768
July 13 to 19	0	.761	.779	.799	.734	.783	.658
Average		.844	.830	.831	.767	.845	.713
July 20 to 26	.3	.728	.790	.894	.750	.876	.684
July 27 to Aug. 2	.3	.739	.726	.752	.730	.735	.589
Aug. 3 to 9	.3	.635	.736	.737	.735	.770	.637
Aug. 10 to 16	.3	.678	.722	.697	.736	.777	.609
Aug. 17 to 23	.3	.639	.646	.609	.681	.745	.618
Aug. 24 to 30	.3	.606	.605	.645	.728	.710	.634
Aug. 31 to Sept. 6	.3	.555	.642	.590	.650	.668	.555
Sept. 7 to 13	.3	.571	.584	.614	.613	.673	.567
Sept. 14 to 20	.3	.588	.636	.649	.698	.684	.585
Average		.638	.676	.687	.702	.737	.608
Sept. 21 to 30	0	.587	.587	.650	.712	.702	.606
Average		.587	.587	.650	.712	.702	.606
Oct. 1 to 7	.6	.560	.601	.654	.681	.632	.649
Oct. 8 to 14	1.0	.571	.598	.661	.701	.634	.595
Oct. 15 to 21	2.0	.599	.654	.680	.702	.647	.589
Oct. 22 to 28	4.0	.614	.631	.633	.672	.634	.630
Average		.586	.621	.656	.689	.636	.616
Oct. 29 to Nov. 7	0	.653	.635	.716	.691	.704	.654
Average		.653	.635	.716	.691	.704	.654

EFFECT ON INORGANIC SULPHUR.

With this form of sulphur the figures for the average daily output during the different periods of the experiment are in close conformity with the general conclusions regarding the total sulphur. During the fore period when the food intake was relatively large, the amount of inorganic sulphur excreted per day was correspondingly high. The daily averages, however, for the first benzoate period, the first after period, the second benzoate period, and the final after period show very little difference. We must conclude, therefore, that sodium benzoate is without influence on the output of inorganic sulphur through the urine.

Date.	Daily dose of benzoate.	Average amount of inorganic sulphur per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.789	0.729	0.741	0.675	0.766	0.619
July 13 to 19	0	.567	.621	.627	.545	.595	.489
Average	....	.678	.675	.684	.610	.680	.554
July 20 to 26	.3	.548	.607	.698	.553	.667	.489
July 27 to Aug. 2	.3	.535	.537	.571	.528	.536	.396
Aug. 3 to 9	.3	.457	.541	.530	.539	.563	.425
Aug. 10 to 16	.3	.492	.549	.509	.531	.567	.429
Aug. 17 to 23	.3	.464	.472	.438	.521	.547	.434
Aug. 24 to 30	.3	.454	.473	.490	.561	.531	.480
Aug. 31 to Sept. 6	.3	.420	.525	.465	.525	.522	.419
Sept. 7 to 13	.3	.438	.489	.500	.503	.534	.436
Sept. 14 to 20	.3	.455	.515	.526	.574	.544	.470
Average	....	.485	.523	.525	.537	.557	.442
Sept. 21 to 30	0	.459	.483	.528	.574	.564	.477
Average	....	.459	.483	.528	.574	.564	.477
Oct. 1 to 7	.6	.450	.498	.544	.556	.541	.522
Oct. 8 to 14	1.0	.455	.503	.547	.591	.520	.477
Oct. 15 to 21	2.0	.460	.542	.535	.576	.523	.460
Oct. 22 to 28	4.0	.442	.512	.495	.546	.512	.501
Average	....	.452	.514	.530	.567	.524	.490
Oct. 29 to Nov. 7	0	.516	.518	.558	.551	.552	.508
Average	....	.516	.518	.558	.551	.552	.508

EFFECT ON ETHEREAL SULPHUR.

The table of daily averages appended shows throughout a very close agreement. The grand averages for the fore period, first benzoate period and the subsequent periods are very nearly identical in all of the individuals. The conclusion therefore is that the production and output of this form of sulphur is not influenced in any tangible degree by the doses of sodium benzoate taken.

Date.	Daily dose of benzoate.	Average amount of ethereal sulphur per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.042	0.039	0.052	0.054	0.058	0.044
July 13 to 19	0	.051	.055	.054	.058	.053	.040
Average		.046	.047	.053	.056	.055	.042
July 20 to 26	.3	.052	.042	.044	.056	.051	.043
July 27 to Aug. 2	.3	.056	.041	.040	.055	.050	.035
Aug. 3 to 9	.3	.048	.047	.047	.050	.047	.038
Aug. 10 to 16	.3	.049	.051	.043	.067	.053	.039
Aug. 17 to 23	.3	.052	.054	.040	.052	.040	.043
Aug. 24 to 30	.3	.057	.048	.048	.051	.043	.033
Aug. 31 to Sept. 6	.3	.044	.039	.036	.041	.036	.036
Sept. 7 to 13	.3	.053	.042	.041	.049	.041	.039
Sept. 14 to 20	.3	.048	.045	.046	.044	.041	.037
Average		.051	.045	.043	.052	.045	.038
Sept. 21 to 30	0	.048	.043	.045	.052	.039	.037
Average		.048	.043	.045	.052	.039	.037
Oct. 1 to 7	.6	.048	.045	.053	.054	.038	.035
Oct. 8 to 14	1.0	.046	.043	.049	.049	.037	.037
Oct. 15 to 21	2.0	.049	.039	.045	.039	.033	.031
Oct. 22 to 28	4.0	.044	.047	.050	.042	.035	.032
Average		.047	.043	.049	.046	.036	.034
Oct. 29 to Nov. 7	0	.055	.050	.054	.053	.045	.044
Average		.055	.050	.054	.053	.045	.044

EFFECT ON NEUTRAL SULPHUR.

The daily averages, together with the grand averages, for the excretion of neutral sulphur through the urine, shown in the accompanying table are not quite in such close agreement as the preceding sulphur figures. It is to be remembered, however, that the data for neutral sulphur are obtained by difference. Consequently, slight variations are here liable to be magnified somewhat. The daily average figure for the first benzoate period in every individual is noticeably higher than the daily average during the first after period. Between the first after period and the second benzoate period, however, where the largest difference would be looked for if sodium benzoate had any specific effect, there is little or no difference in the average daily excretion, the grand averages for the two periods being essentially the same. This is likewise true, in some of the individuals at least, with regard to the final after period. Hence, we are not disposed to attribute any specific action to sodium benzoate in influencing the excretion of neutral sulphur through the urine.

Date.	Daily dose of benzoate.	Average amount of neutral sulphur per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.108	0.073	0.075	0.072	0.092	0.123
July 13 to 19	0	.143	.094	.113	.135	.136	.128
Average		.125	.083	.094	.103	.114	.125
July 20 to 26	.3	.126	.141	.152	.141	.158	.153
July 27 to Aug. 2	.3	.147	.145	.141	.147	.149	.159
Aug. 3 to 9	.3	.130	.148	.161	.146	.160	.173
Aug. 10 to 16	.3	.137	.124	.145	.138	.156	.141
Aug. 17 to 23	.3	.123	.120	.130	.108	.157	.140
Aug. 24 to 30	.3	.106	.084	.107	.110	.137	.123
Aug. 31 to Sept. 6	.3	.088	.078	.089	.083	.110	.099
Sept. 7 to 13	.3	.080	.061	.073	.066	.100	.092
Sept. 14 to 20	.3	.086	.076	.077	.080	.099	.077
Average		.113	.108	.117	.113	.136	.128
Sept. 21 to 30	0	.080	.059	.076	.087	.099	.086
Average		.080	.059	.076	.087	.099	.086
Oct. 1 to 7	.6	.061	.057	.058	.071	.054	.092
Oct. 8 to 14	1.0	.070	.051	.064	.066	.075	.081
Oct. 15 to 21	2.0	.090	.072	.099	.087	.090	.102
Oct. 22 to 28	4.0	.098	.073	.086	.085	.085	.096
Average		.080	.063	.076	.077	.076	.092
Oct. 29 to Nov. 7	0	.082	.068	.103	.086	.107	.101
Average		.082	.068	.103	.086	.107	.101

EFFECT ON THE DISTRIBUTION OF SULPHUR.

Having presented the data bearing upon the output of the different forms of sulphur through the urine in grams per day, we may next consider how far sodium benzoate tends to disturb the average distribution of the sulphur, i. e., how far the percentages of the different forms of sulphur calculated on the total sulphur are changed. In the tables showing the daily distribution of nitrogen and sulphur in the urine will be found the daily percentages of the different forms of sulphur for each individual. For convenience, we append here tables for each subject giving the daily average distribution of sulphur for the different periods, together with the grand averages for the so-called normal periods and the two benzoate periods. Comparison of the grand averages shows, first, that the daily percentage of inorganic sulphur during the first benzoate period is somewhat less in every individual than during the fore period. Further, during the first after period the percentage of inorganic sulphur in every instance rises somewhat, approximating to the daily average output during the fore period. During the second benzoate period, however, when the larger doses of benzoate were given, the average daily output of inorganic sulphur remains substantially stationary, in some individuals falling slightly, in others rising slightly. In the final after period, the inorganic sulphur tends to fall off as compared with the average daily excretion during the preceding benzoate period. The only exception to this rule is in the case of H. H. G. As there is a

lack of any conformity in these fluctuations, however, we are not disposed to consider them as having any special meaning.

Regarding the percentage distribution of ethereal sulphur, comparison of the grand averages for the different periods shows, in most cases, a fairly close agreement. Thus, with the subject L. M. L. the average daily output of ethereal sulphur for the fore period was 6.4; for the first benzoate period, 6.2; for the first after period, 6.9; for the second benzoate period, 7.5; for the final after period, 7.5. These differences are more or less typical of what is to be seen in connection with the other subjects of the experiment. In one or two cases the variations are somewhat more noticeable, but there is no such degree of uniformity as would imply any definite or specific action on the part of the benzoate.

Regarding the percentage distribution of neutral sulphur, the results point to the same general conclusion. During the first benzoate period there is a tendency for the neutral sulphur to be increased as compared with the average daily proportion during the fore period. During the second benzoate period, however, with the larger dosage, the percentage of neutral sulphur is either unaltered, as compared with the first after period, or is diminished somewhat. In one instance there is a slight increase. The figures taken together, however, fail to show any action that is at all specific or peculiar.

Daily average distribution of sulphur.

[Percentages of total sulphur.]

SUBJECT H. H. G.

Date.	Daily dose of benzoate.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
	Grams.			
July 6 to 12	0	83.8	4.4	11.3
July 13 to 19	0	74.6	6.7	18.7
Average		79.2	5.5	15.0
July 20 to 26	.3	75.7	7.0	17.1
July 27 to August 2	.3	72.4	7.5	19.9
August 3 to 9	.3	72.1	7.5	20.4
August 10 to 16	.3	72.6	7.2	20.2
August 17 to 23	.3	72.6	8.1	19.2
August 24 to 30	.3	75.1	8.1	16.6
August 31 to September 6	.3	76.1	8.0	15.5
September 7 to 13	.3	76.4	9.7	13.7
September 14 to 20	.3	75.9	8.2	14.7
Average		74.3	7.9	17.5
September 21 to 30	0	78.2	8.1	13.6
Average		78.2	8.1	13.6
October 1 to 7	.6	80.3	8.5	10.9
October 8 to 14	1.0	79.7	8.0	12.2
October 15 to 21	2.0	76.7	8.2	15.1
October 22 to 28	4.0	72.1	8.1	16.1
Average		77.1	8.2	13.6
October 29 to November 7	0	79.0	8.4	12.5
Average		79.0	8.4	12.5

Daily average distribution of sulphur—Continued.

[Percentages of total sulphur.]

SUBJECT W. W. H.

Date.	Daily dose of benzoate.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
	Grams.			
July 6 to 12	0	85.3	6.4	8.2
July 13 to 19	0	80.7	7.1	12.2
Average		83.0	6.7	10.2
July 20 to 26	.3	76.8	5.3	17.8
July 27 to Aug. 2	.3	74.1	5.6	17.4
Aug. 3 to 9	.3	73.6	6.3	20.0
Aug. 10 to 16	.3	76.0	7.0	17.0
Aug. 17 to 23	.3	73.1	8.3	18.4
Aug. 24 to 30	.3	78.2	7.9	13.8
Aug. 31 to Sept. 6	.3	81.7	6.0	12.1
Sept. 7 to 13	.3	82.0	7.6	10.2
Sept. 14 to 20	.3	81.0	7.0	11.9
Average		77.4	6.8	15.4
Sept. 21 to 30	0	82.1	7.3	10.1
Average		82.1	7.3	10.1
Oct. 1 to 7	.6	82.9	7.4	9.4
Oct. 8 to 14	1.0	84.2	7.1	8.6
Oct. 15 to 21	2.0	82.9	5.9	11.1
Oct. 22 to 28	4.0	81.0	7.4	11.5
Average		82.7	6.9	10.2
Oct. 29 to Nov. 7	0	81.7	7.8	10.5
Average		81.7	7.8	10.5

SUBJECT L. M. L.

Date.	Daily dose of benzoate.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6 to 12	0	85.3	6.1	8.6
July 13 to 19	0	79.0	6.8	14.2
Average		82.1	6.4	11.4
July 20 to 26	.3	78.2	4.9	16.8
July 27 to Aug. 2	.3	76.1	5.3	18.6
Aug. 3 to 9	.3	71.8	6.3	21.8
Aug. 10 to 16	.3	73.1	6.1	20.8
Aug. 17 to 23	.3	71.7	6.4	21.5
Aug. 24 to 30	3	76.0	7.4	16.6
Aug. 31 to Sept. 6	.3	78.8	6.1	15.1
Sept. 7 to 13	.3	81.5	6.6	11.9
Sept. 14 to 20	.3	81.1	7.1	11.8
Average		76.5	6.2	17.2
Sept. 21 to 30	0	81.3	6.9	11.6
Average		81.3	6.9	11.6
Oct. 1 to 7	.6	83.2	8.1	8.8
Oct. 8 to 14	1.0	82.8	7.4	9.7
Oct. 15 to 21	2.0	78.7	6.6	14.5
Oct. 22 to 28	4.0	78.4	7.9	13.6
Average		80.8	7.5	11.6
Oct. 29 to Nov. 7	0	78.0	7.5	14.4
Average		78.0	7.5	14.4

SUBJECT J. F. L.

Date.	Daily dose of benzoate.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6 to 12	0	84.4	6.5	9.0
July 13 to 19	0	74.0	7.8	18.2
Average		79.2	7.1	13.6

Daily average distribution of sulphur—Continued.

[Percentages of total sulphur.]

SUBJECT J. F. L.—Continued.

Date.	Daily dose of benzoate.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
	Grams.			
July 20 to 26	0.3	73.8	7.4	18.8
July 27 to Aug. 2	.3	72.4	7.5	20.1
Aug. 3 to 9	.3	73.4	6.8	19.8
Aug. 10 to 16	.3	72.2	9.1	18.7
Aug. 17 to 23	.3	76.4	7.6	15.8
Aug. 24 to 30	.3	77.1	7.0	15.1
Aug. 31 to Sept. 6	.3	80.8	6.3	12.7
Sept. 7 to 13	.3	81.6	7.7	10.4
Sept. 14 to 20	.3	82.3	6.3	11.4
Average		76.7	7.3	15.8
Sept. 21 to 30	0	80.5	7.3	12.2
Average		80.5	7.3	12.2
Oct. 1 to 7	.6	81.7	7.9	10.4
Oct. 8 to 14	1.0	84.3	6.2	9.4
Oct. 15 to 21	2.0	82.1	5.5	12.3
Oct. 22 to 28	4.0	81.3	6.2	12.5
Average		82.3	6.4	11.1
Oct. 29 to Nov. 7	0	79.8	7.6	12.4
Average		79.8	7.6	12.4

SUBJECT E. C. M.

Date.	Daily dose of benzoate.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6 to 12	0	83.9	8.1	9.6
July 13 to 19	0	76.1	6.7	17.2
Average		80.0	7.4	13.4
July 20 to 26	.3	76.2	5.8	18.0
July 27 to Aug. 2	.3	73.0	6.8	20.2
Aug. 3 to 9	.3	73.2	6.1	20.7
Aug. 10 to 16	.3	73.0	6.8	20.1
Aug. 17 to 23	.3	73.6	5.3	21.1
Aug. 24 to 30	.3	74.8	6.0	19.2
Aug. 31 to Sept. 6	.3	78.2	5.4	16.4
Sept. 7 to 13	.3	75.3	6.1	14.6
Sept. 14 to 20	.3	79.6	6.0	14.4
Average		75.2	6.0	18.3
Sept. 21 to 30	0	80.4	5.5	14.0
Average		80.4	5.5	14.0
Oct. 1 to 7	.6	85.5	6.0	8.5
Oct. 8 to 14	1.0	82.1	5.8	11.9
Oct. 15 to 21	2.0	80.7	5.2	13.9
Oct. 22 to 28	4.0	80.7	5.6	13.6
Average		82.2	5.6	11.9
Oct. 29 to Nov. 7	0	78.5	6.4	15.1
Average		78.5	6.4	15.1

SUBJECT W. C. R.

Date.	Daily dose of benzoate.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6 to 12	0	78.9	5.5	14.6
July 13 to 19	0	74.4	6.0	19.4
Average		76.6	5.8	17.0
July 20 to 26	.3	71.6	6.2	22.2
July 27 to Aug. 2	.3	67.1	5.9	27.0
Aug. 3 to 9	.3	66.7	5.9	27.2
Aug. 10 to 16	.3	70.5	6.4	23.1

Daily average distribution of sulphur—Continued.

[Percentages of total sulphur.]

SUBJECT W. C. R.—Continued.

Date.	Daily dose of benzoate.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
	Grams.			
Oct. 17 to 23	0.3	70.3	6.9	22.7
Oct. 24 to 30	.3	75.4	5.2	19.4
Aug. 31 to Sept. 6	.3	75.6	6.5	17.8
Sept. 7 to 13	.3	76.7	6.8	16.2
Sept. 14 to 20	.3	80.4	6.3	13.1
Average		72.7	6.2	20.9
Sept. 21 to 30	0	79.8	6.1	14.1
Average		79.8	6.1	14.1
Oct. 1 to 7	.6	80.5	5.3	14.2
Oct. 8 to 14	1.0	80.3	6.2	13.5
Oct. 15 to 21	2.0	78.1	5.3	17.3
Oct. 22 to 28	4.0	79.6	5.0	15.2
Average		79.6	5.4	15.0
Oct. 29 to Nov. 7	0	77.8	6.7	15.4
Average		77.8	6.7	15.4

RATIO OF SULPHUR TO NITROGEN.

Changes in the metabolism of the body, either of nitrogen metabolism or sulphur metabolism, induced by sodium benzoate would naturally lead to changes in the ratio of sulphur to nitrogen in the urine. The three tables which follow show the ratio of sulphur to nitrogen for each individual during the different periods of the experiment, the grand averages being perhaps best adapted for simple comparison. Critical study of the tables shows no appreciable change in the ratio under the influence of sodium benzoate. Thus, with the subject H. H. G. the average daily ratio of sulphur to nitrogen for the fore period is 1:13.4; for the first benzoate period, 1:13.6; for the first after period, 1:14.5; for the second benzoate period, 1:14.7; for the final after period, 1:14.2. Again, with the subject W. W. H. the average daily ratio of sulphur to nitrogen during the fore period is 1:14.2; in the first benzoate period, 1:13.0; in the first after period, 1:14.2; in the second benzoate period, 1:14.0; in the final after period, 1:14.0. It is plain that differences such as these, which are more or less typical of all of the individuals, have no significance and indicate quite clearly that sodium benzoate in the doses taken by our subjects has no disturbing influence on the relative excretion of sulphur and nitrogen.

Ratio of sulphur to nitrogen.

[Averages per day.]

Date.	Daily dose of benzoate.	H. H. G.			W. W. H.		
		Sulphur.	Nitrogen.	S:N.	Sulphur.	Nitrogen.	S:N.
	Grams.	*Gram.*	*Grams.*		*Gram.*	*Grams.*	
July 6 to 12	0	0.927	12.59	1:13.5	0.882	12.57	1:14.2
July 13 to 19	0	.761	10.09	1:13.2	.779	11.06	1:14.2
Average	....	.844	11.34	1:13.4	.830	11.81	1:14.2
July 20 to 26	.3	.728	9.85	1:13.5	.790	10.14	1:12.8
July 27 to Aug. 2	.3	.739	9.49	1:12.8	.726	9.16	1:12.6
Aug. 3 to 9	.3	.635	8.27	1:13.0	.736	9.27	1:12.6
Aug. 10 to 16	.3	.678	8.83	1:13.0	.722	9.68	1:13.4
Aug. 17 to 23	.3	.639	8.56	1:13.3	.646	8.22	1:12.7
Aug. 24 to 30	.3	.606	8.10	1:13.3	.605	7.76	1.12.8
Aug. 31 to Sept. 6	.3	.555	7.99	1:14.3	.642	7.74	1:12.1
Sept. 7 to 13	.3	.571	8.42	1:14.7	.584	7.88	1:13.4
Sept. 14 to 20	.3	.588	8.64	1:14.6	.636	9.24	1:14.5
Average	....	.638	8.68	1:13.6	.676	8.78	1:13.0
Sept. 21 to 30	0	.587	8.53	1:14.5	.587	8.35	1:14.2
Average	....	.587	8.53	1:14.5	.587	8.35	1:14.2
Oct. 1 to 7	.6	.560	8.54	1:15.2	.601	8.65	1:14.3
Oct. 8 to 14	1.0	.571	8.44	1:14.7	.598	8.39	1:14.0
Oct. 15 to 21	2.0	.599	8.74	1:14.5	.654	9.03	1:13.8
Oct. 22 to 28	4.0	.614	8.87	1:14.4	.631	8.91	1:14.1
Average	....	.586	8.64	1:14.7	.621	8.74	1:14.0
Oct. 29 to Nov. 7	0	.653	9.27	1:14.2	.635	8.88	1:14.0
Average	....	.653	9.27	1:14.2	.635	8.88	1:14.0

Date.	Daily dose of benzoate.	L. M. L.			J. F. L.		
		Sulphur.	Nitrogen.	S:N.	Sulphur.	Nitrogen.	S:N.
	Grams.	*Gram.*	*Grams.*		*Gram.*	*Grams.*	
July 6 to 12	0	0.864	12.11	1:14.0	0.800	10.39	1:13.0
July 13 to 19	0	.799	11.27	1:14.1	.734	9.49	1:12.9
Average	....	.831	11.69	1:14.0	.767	9.94	1:13.0
July 20 to 26	.3	.894	11.74	1:13.1	.750	9.12	1:12.1
July 27 to Aug. 2	.3	.752	9.74	1:12.9	.730	8.86	1:12.1
Aug. 3 to 9	.3	.737	9.53	1:12.9	.735	8.95	1:12.1
Aug. 10 to 16	.3	.697	9.22	1:13.2	.736	9.13	1:12.4
Aug. 17 to 23	.3	.609	8.18	1:13.4	.681	8.78	1:12.8
Aug. 24 to 30	.3	.645	9.03	1:14.0	.728	9.43	1:12.9
Aug. 31 to Sept. 6	.3	.590	8.58	1:14.5	.650	8.81	1:13.5
Sept. 7 to 13	.3	.614	9.32	1:15.1	.613	9.06	1:14.7
Sept. 14 to 20	.3	.649	9.89	1:15.2	.698	10.00	1:14.3
Average	....	.687	9.47	1:13.7	.702	9.12	1:13.0
Sept. 21 to 30	0	.650	9.43	1:14.5	.712	10.01	1:14.0
Average	....	.650	9.43	1:14.5	.712	10.01	1:14.0
Oct. 1 to 7	.6	.654	9.75	1:14.9	.681	10.19	1:14.9
Oct. 8 to 14	1.0	.661	9.66	1:14.6	.701	10.19	1:14.5
Oct. 15 to 21	2.0	.680	9.21	1:13.5	.702	9.92	1:14.1
Oct. 22 to 28	4.0	.633	9.08	1:14.3	.672	9.49	1:14.1
Average	....	.656	9.42	1:14.3	.689	9.94	1:14.4
Oct. 29 to Nov. 7	0	.716	9.85	1:13.7	.691	9.38	1:13.5
Average	....	.716	9.85	1:13.7	.691	9.38	1:13.5

Ratio of sulphur to nitrogen—Continued.

[Averages per day.]

Date.	Daily dose of benzoate.	E. C. M.			W. C. R.		
		Sulphur.	Nitrogen.	S:N.	Sulphur.	Nitrogen.	S:N.
	Grams.	*Gram.*	*Grams.*		*Gram.*	*Grams.*	
July 6 to 12	0	0.908	12.46	1:13.7	0.768	9.93	1:12.9
July 13 to 19	0	.783	10.27	1:13.1	.658	8.70	1:13.2
Average		.845	11.36	1:13.4	.713	9.31	1:13.0
July 20 to 26	.3	.876	11.15	1:12.7	.684	8.35	1:12.2
July 27 to Aug. 2	.3	.735	9.49	1:12.9	.589	7.31	1:12.4
Aug. 3 to 9	.3	.770	9.55	1:12.4	.637	7.98	1:12.5
Aug. 10 to 16	.3	.777	9.94	1:12.8	.609	8.42	1:13.8
Aug. 17 to 23	.3	.745	9.51	1:12.7	.618	7.95	1:12.8
Aug. 24 to 30	.3	.710	9.40	1:13.2	.634	8.74	1:13.7
Aug. 31 to Sept. 6	.3	.668	9.72	1:14.5	.555	7.84	1:14.1
Sept. 7 to 13	.3	.673	9.57	1:14.2	.567	8.13	1:14.3
Sept. 14 to 20	.3	.684	10.08	1:14.7	.585	8.76	1:14.8
Average		.737	9.82	1:13.3	.608	8.16	1:13.4
Sept. 21 to 30	0	.702	9.83	1:14.0	.606	8.58	1:14.1
Average		.702	9.83	1:14.0	.606	8.58	1:14.1
Oct. 1 to 7	.6	.632	9.68	1:15.3	.649	9.30	1:14.3
Oct. 8 to 14	1.0	.634	9.34	1:14.7	.595	8.74	1:14.6
Oct. 15 to 21	2.0	.647	9.59	1:14.8	.589	8.28	1:14.0
Oct. 22 to 28	4.0	.634	9.13	1:14.4	.630	9.06	1:14.3
Average		.636	9.43	1:14.8	.616	8.84	1:14.3
Oct. 29 to Nov. 7	0	.704	9.62	1:13.6	.654	9.21	1:14.0
Average		.704	9.62	1:13.6	.654	9.21	1:14.0

EFFECT ON PHOSPHATE-PHOSPHORUS.

Possible effect of sodium benzoate on the phosphorus metabolism of the body can best be detected by noting such changes as may occur in the excretion of phosphorus through the urine. In the tables showing the daily composition of the urine the phosphate-phosphorus excreted each day by the different individuals is shown. In the table here appended is given the average daily output in grams for the seventeen periods of the experiment, together with the grand averages for the fore period, the first benzoate period, etc. Comparison of these figures shows a lack of any distinct effect on the part of the benzoate upon the phosphate-phosphorus excreted. The average daily output for the fore period is in several cases higher than in the after periods, but between the first benzoate period, the second benzoate period and the two other periods there is no appreciable difference in the average amount of phosphorus excreted each day. The conclusion is therefore obvious that sodium benzoate does not exert in the doses taken by our subjects any influence upon the excretion of phosphate-phosphorus, and consequently cannot be accredited with any noticeable influence upon the phosphorus metabolism of the body.

Date.	Daily dose of benzoate.	Average amount of phosphate-phosphorus per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Gram.*	*Gram.*	*Grams.*	*Gram.*	*Gram.*	*Gram.*
July 6 to 12	0	0.90	0.94	1.06	0.69	0.93	0.72
July 13 to 19	0	.77	.89	1.01	.60	.77	.64
Average		.83	.91	1.03	.64	.85	.68
July 20 to 26	.3	.74	.79	1.00	.63	.86	.61
July 27 to Aug. 2	.3	.70	.78	.88	.60	.73	.57
Aug. 3 to 9	.3	.65	.68	.73	.58	.68	.58
Aug. 10 to 16	.3	.65	.74	.72	.59	.75	.56
Aug. 17 to 23	.3	.64	.68	.71	.57	.69	.61
Aug. 24 to 30	.3	.64	.62	.76	.58	.71	.61
Aug. 31 to Sept. 6	.3	.62	.62	.71	.60	.69	.61
Sept. 7 to 13	.3	.69	.69	.79	.64	.72	.69
Sept. 14 to 20	.3	.68	.61	.79	.69	.74	.67
Average		.67	.69	.79	.61	.73	.61
Sept. 21 to 30	0	.69	.69	.81	.67	.73	.69
Average		.69	.69	.81	.67	.73	.69
Oct. 1 to 7	.6	.69	.73	.79	.70	.70	.69
Oct. 8 to 14	1.0	.66	.73	.80	.71	.69	.67
Oct. 15 to 21	2.0	.62	.73	.74	.69	.66	.65
Oct. 22 to 28	4.0	.64	.72	.77	.68	.67	.68
Average		.65	.73	.77	.69	.68	.67
Oct. 29 to Nov. 7	0	.68	.73	.80	.69	.73	.66
Average		.68	.73	.80	.69	.73	.66

RATIO OF PHOSPHORUS TO NITROGEN.

Possible disturbance of the ordinary relation between phosphorus metabolism and nitrogen metabolism has been sought for by calculating the ratio of phosphorus excreted to nitrogen excreted per day. The three following tables give the average daily excretion of the two elements for the periods indicated, with the ratio of P:N. Study of the figures presented shows on the whole a remarkable degree of uniformity for the different individuals throughout the entire experiment. Thus, with the subject E. C. M. the ratio of phosphorus to nitrogen for the fore period is 1:13.3; for the first benzoate period, 1:13.4; for the first after period, 1:13.4; for the second benzoate period, 1:13.8; for the final after period, 1:13.1. While these figures for E. C. M. are perhaps closer than in most of the other individuals, still throughout there is a very close agreement; so much so that it is obvious sodium benzoate does not disturb in any degree the ratio between the output of phosphorus and nitrogen. Here and there a slight discrepancy may be found, but the majority of the results surely point to a lack of any tangible influence on the part of sodium benzoate in changing the ratio of these two elements.

Ratio of phosphorus to nitrogen.

[Averages per day.]

Date.	Daily dose of benzoate.	H. H. G. Phosphorus.	H. H. G. Nitrogen.	H. H. G. P:N.	W. W. H. Phosphorus.	W. W. H. Nitrogen.	W. W. H. P:N.
	Grams.	*Gram.*	*Grams.*		*Gram.*	*Grams.*	
July 6 to 12	0	0.90	12.59	1:13.9	0.94	12.57	1:13.3
July 13 to 19	0	.77	10.08	1:13.0	.89	11.06	1:12.4
Average		.83	11.33	1:13.6	.91	11.81	1:12.9
July 20 to 26	.3	.74	9.85	1:13.3	.79	10.14	1:12.8
July 27 to Aug. 2	.3	.70	9.49	1:13.5	.78	9.16	1:11.7
Aug. 3 to 9	.3	.65	8.27	1:12.6	.68	9.27	1:13.6
Aug. 10 to 16	.3	.65	8.83	1:13.5	.74	9.68	1:13.0
Aug. 17 to 23	.3	.64	8.56	1:13.3	.68	8.22	1:12.0
Aug. 24 to 30	.3	.64	8.10	1:12.6	.62	7.76	1:12.5
Aug. 31 to Sept. 6	.3	.62	7.99	1:12.9	.62	7.74	1:12.4
Sept. 7 to 13	.3	.69	8.42	1:12.2	.69	7.88	1:11.4
Sept. 14 to 20	.3	.68	8.64	1:12.7	.61	9.24	1:15.1
Average		.66	8.68	1:13.1	.69	8.78	1:12.7
Sept. 21 to 30	0	.69	8.53	1:12.3	.69	8.35	1:12.1
Average		.69	8.53	1:12.3	.69	8.35	1:12.1
Oct. 1 to 7	.6	.69	8.54	1:12.3	.73	8.65	1:11.8
Oct. 8 to 14	1.0	.66	8.44	1:12.8	.73	8.39	1:11.5
Oct. 15 to 21	2.0	.62	8.74	1:14.0	.73	9.03	1:12.3
Oct. 22 to 28	4.0	.64	8.87	1:13.8	.72	8.91	1:12.3
Average		.65	8.63	1:13.2	.73	8.74	1:11.9
Oct. 29 to Nov. 7	0	.68	9.27	1:13.5	.73	8.88	1:12.1
Average		.68	9.27	1:13.5	.73	8.88	1:12.1

Date	Daily dose of benzoate.	L. M. L. Phosphorus.	L. M. L. Nitrogen.	L. M. L. P:N.	J. F. L. Phosphorus.	J. F. L. Nitrogen.	J. F. L. P:N.
	Grams.	*Gram.*	*Grams.*		*Gram.*	*Grams.*	
July 6 to 12	0	1.06	12.11	1:11.4	0.69	10.39	1:15.0
July 13 to 19	0	1.01	11.27	1:11.1	.60	9.49	1:15.8
Average		1.03	11.69	1:11.3	.64	9.94	1:15.5
July 20 to 26	.3	1.00	11.74	1:11.7	.63	9.12	1:14.4
July 27 to Aug. 2	.3	.88	9.74	1:11.0	.60	8.86	1:14.7
Aug. 3 to 9	.3	.73	9.53	1:13.0	.58	8.95	1:15.4
Aug. 10 to 16	.3	.72	9.22	1:12.8	.59	9.13	1:15.4
Aug. 17 to 23	.3	.71	8.18	1:11.5	.57	8.78	1:15.4
Aug. 24 to 30	.3	.76	9.03	1:11.8	.58	9.43	1:16.2
Aug. 31 to Sept. 6	.3	.71	8.58	1:12.0	.60	8.81	1:14.6
Sept. 7 to 13	.3	.79	9.32	1:11.8	.64	9.06	1:14.1
Sept. 14 to 20	.3	.79	9.89	1:12.5	.69	10.00	1:14.5
Average		.79	9.47	1:11.9	.61	9.12	1:15.0
Sept. 21 to 30	0	.81	9.43	1:11.6	.67	10.01	1:15.0
Average		.81	9.43	1:11.6	.67	10.01	1:15.0
Oct. 1 to 7	.6	.79	9.75	1:12.3	.70	10.19	1:14.5
Oct. 8 to 14	1.0	.80	9.66	1:12.0	.71	10.19	1:14.3
Oct. 15 to 21	2.0	.74	9.21	1:12.4	.69	9.92	1:14.3
Oct. 22 to 28	4.0	.77	9.08	1:11.8	.68	9.49	1:13.9
Average		.77	9.43	1:12.2	.69	9.94	1:14.4
Oct. 29 to Nov. 7	0	.80	9.85	1:12.3	.69	9.38	1:13.5
Average		.80	9.85	1:12.3	.69	9.38	1:13.5

Ratio of phosphorus to nitrogen—Continued.

[Averages per day.]

Date.	Daily dose of benzoate.	E. C. M.			W. C. R.		
		Phosphorus.	Nitrogen.	P:N.	Phosphorus.	Nitrogen.	P:N.
	Grams.	*Gram.*	*Grams.*		*Gram.*	*Grams.*	
July 6 to 12	0	0.93	12.46	1:13.4	0.72	9.63	1:13.3
July 13 to 19	0	.77	10.27	1:13.3	.64	8.70	1:13.5
Average		.85	11.37	1:13.3	.68	9.16	1:13.4
July 20 to 26	.3	.86	11.15	1:12.9	.61	8.35	1:13.6
July 27 to August 2	.3	.73	9.49	1:13.0	.57	7.31	1:12.8
August 3 to 9	.3	.68	9.55	1:14.0	.58	7.98	1:13.7
August 10 to 16	.3	.75	9.94	1:13.2	.56	8.42	1:15.0
August 17 to 23	.3	.69	9.51	1:13.8	.61	7.95	1:13.0
August 24 to 30	.3	.71	9.40	1:13.2	.61	8.74	1:14.3
August 31 to September 6	.3	.69	9.72	1:14.0	.61	7.84	1:12.8
September 7 to 13	.3	.72	9.57	1:13.3	.69	8.13	1:11.7
September 14 to 20	.3	.74	10.08	1:13.6	.67	8.76	1:13.0
Average		.73	9.82	1:13.4	.61	8.16	1:13.3
September 21 to 30	0	.73	9.83	1:13.4	.69	8.58	1:12.4
Average		.73	9.83	1:13.4	.69	8.58	1:12.4
October 1 to 7	.6	.70	9.68	1:13.8	.69	9.30	1:13.4
October 8 to 14	1.0	.69	9.34	1:13.5	.67	8.74	1:13.0
October 15 to 21	2.0	.66	9.59	1:14.5	.65	8.28	1:12.7
October 22 to 28	4.0	.67	9.13	1:13.6	.68	9.06	1:13.3
Average		.68	9.43	1:13.8	.67	8.84	1:13.2
October 29 to November 7	0	.73	9.62	1:13.1	.66	9.21	1:13.9
Average		.73	9.62	1:13.1	.66	9.21	1:13.9

EFFECT ON INDICAN.

The indican of the urine is generally considered as connected, in some measure at least, with intestinal putrefaction by which indol is formed. This being the case, the indican of the urine becomes to some extent a measure of the putrefactive processes in the intestine. It is interesting to note, therefore, the possible effect of sodium benzoate upon the amount of indican in the urine. The tables giving the daily composition of the urine show the fluctuations from day to day with the different individuals. The accompanying table, dealing solely with averages, gives the average amount of indican per day for each individual for the seventeen periods of the experiment, while the grand averages show the amount excreted for the fore period, first benzoate period, second benzoate period, etc. The figures for the fore period are, in several cases at least, relatively high, but in the first benzoate period and the later periods the average output for each individual shows very little change. We might draw the inference, comparing the data of the fore period with the data of the subsequent periods, that sodium benzoate tends to lower indican production. Probably, however, the somewhat lower figures for indican after July 20 are associated, in a measure at least, with

the lowered intake of protein food. If comparison is limited to the first benzoate period and later periods, there is very little suggestion of any marked effect on the part of the benzoate. Taking all the data into consideration, we think the conclusion is justified that sodium benzoate in the doses used in our experiment and under the conditions of relatively low protein intake does not exert much, if any, influence upon the amount of indican in the urine.

Date.	Daily dose of benzoate.	Average amount of indican per day. (Standard Fehling's solution = 100.)					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.						
July 6 to 12	0	14	58	12	51	26	24
July 13 to 19	0	22	43	25	58	11	Trace.
Average		18	50	18	54	18	12
July 20 to 26	.3	25	23	17	54	16	Trace.
July 27 to Aug. 2	.3	20	27	9	52	46	Trace.
Aug. 3 to 9	.3	14	......	12	36	16	Trace.
Aug. 10 to 16	.3	18	23	10	39	12	10
Aug. 17 to 23	.3	16	17	Trace.	44	10	11
Aug. 24 to 30	.3	13	19	Trace.	40	14	Trace.
Aug. 31 to Sept. 6	.3	15	17	Trace.	40	10	9
Sept. 7 to 13	.3	12	21	Trace.	46	11	12
Sept. 14 to 20	.3	10	20	Trace.	38	11	11
Average		16	21	5	43	16	6
Sept. 21 to 30	0	8	17	Trace.	33	8	Trace.
Average		8	17	Trace.	33	8	Trace.
Oct. 1 to 7	.6	14	33	17	43	14	Trace.
Oct. 8 to 14	1.0	16	17	11	36	10	Trace.
Oct. 15 to 21	2.0	13	13	Trace.	32	Trace.	Trace.
Oct. 22 to 28	4.0	11	14	Trace.	28	9	Trace.
Average		14	19	7	35	8	Trace.
Oct. 29 to Nov. 7	0	14	20	Trace.	35	12	11
Average		14	20	Trace.	35	12	11

EFFECT ON SODIUM CHLORIDE.

While the sodium chloride of the urine ordinarily has little significance except as indicating the amount of salt taken with the daily food, yet for completeness chlorine was determined each day, and the following table giving the average amounts of chlorine as sodium chloride for the different periods of the experiment is presented. Comparison of the grand averages shows a fairly close agreement in the daily output of chlorine. There is no change to be noted in those periods when sodium benzoate was taken. The output of chloride runs practically unchanged, with here and there a slight fluctuation, which, however, can have no special significance.

Date.	Daily dose of benzoate.	Average amount of chlorine as NaCl per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 12	0	12.14	12.59	11.49	11.88	14.31	12.42
July 13 to 19	0	10.58	10.44	9.73	10.88	12.50	11.17
Average		11.36	11.51	10.61	11.38	13.40	11.79
July 20 to 26	.3	10.81	11.57	11.06	13.09	14.07	11.24
July 27 to Aug. 2	.3	10.70	11.83	9.77	11.29	11.03	10.80
Aug. 3 to 9	.3	12.15	10.11	11.93	12.90	14.26	11.39
Aug. 10 to 16	.3	10.99	13.58	11.46	12.64	14.52	11.11
Aug. 17 to 23	.3	11.19	12.69	11.68	12.45	14.74	12.51
Aug. 24 to 30	.3	10.75	12.20	11.01	11.91	14.27	12.63
Aug. 31 to Sept. 6	.3	11.11	12.66	12.12	11.87	15.19	11.49
Sept. 7 to 13	.3	13.02	13.63	12.56	11.84	12.90	13.00
Sept. 14 to 20	.3	12.52	13.20	13.67	12.57	14.19	12.66
Average		11.47	12.38	11.69	12.28	13.90	11.87
Sept. 21 to 30	0	11.48	13.35	12.92	12.78	13.87	11.95
Average		11.48	13.35	12.92	12.78	13.87	11.95
Oct. 1 to 7	.6	11.35	13.78	12.14	11.54	13.81	13.70
Oct. 8 to 14	1.0	12.87	16.02	13.62	12.97	15.29	13.69
Oct. 15 to 21	2.0	12.48	16.60	13.80	13.17	15.48	15.26
Oct. 22 to 28	4.0	10.18	13.55	11.37	10.71	14.48	11.49
Average		11.72	14.98	12.73	12.09	14.76	13.53
Oct. 29 to Nov. 7	0	12.17	13.48	13.18	12.87	13.96	13.20
Average		12.17	13.48	13.18	12.87	13.96	13.20

EFFECT ON TOTAL ACIDITY.

The accompanying table giving the average total acidity of the urine, expressed in grams of oxalic acid, for the different periods of the experiment, shows very little variation for the different individuals. In the fore period the average daily acidity was higher than in the later periods. There is a tendency, noticeable in all of the subjects, for sodium benzoate to lower the acidity of the urine slightly. This conclusion is based upon the figures of the fore period, combined with the figures showing the average daily acidity during the final after period. Taking these two groups as standards of comparison, it is plain that during the first benzoate period and in the second benzoate period the acidity tends to fall. The differences are not great, but there is suggested an influence here which is worthy of notice.

Date.	Daily dose of benzoate.	Average total acidity per day in terms of oxalic acid.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 12	0	1.99	2.13	2.43	1.75	2.43	1.52
July 13 to 19	0	1.41	1.84	2.11	1.39	1.82	1.42
Average	....	1.70	1.98	2.27	1.57	2.12	1.47
July 20 to 26	.3	1.65	1.72	2.58	1.74	2.39	1.45
July 27 to Aug. 2	.3	1.29	1.59	1.75	1.48	1.93	1.17
Aug. 3 to 9	.3	1.24	1.22	1.62	1.48	1.79	1.18
Aug. 10 to 16	.3	1.50	1.57	1.74	1.50	1.86	1.30
Aug. 17 to 23	.3	1.31	1.32	1.49	1.30	1.71	1.28
Aug. 24 to 30	.3	1.36	1.33	1.63	1.47	1.69	1.37
Aug. 31 to Sept. 6	.3	1.36	1.20	1.37	1.19	1.60	1.12
Sept. 7 to 13	.3	1.35	1.36	1.58	1.40	1.68	1.34
Sept. 14 to 20	.3	1.45	1.29	1.60	1.44	1.75	1.44
Average	....	1.39	1.40	1.70	1.44	1.82	1.29
Sept. 21 to 30	0	1.31	1.15	1.57	1.30	1.70	1.24
Average	....	1.31	1.15	1.57	1.30	1.70	1.24
Oct. 1 to 7	.6	1.38	1.32	1.63	1.50	1.76	1.45
Oct. 8 to 14	1.0	1.35	1.43	1.62	1.56	1.78	1.30
Oct. 15 to 21	2.0	1.21	1.26	1.51	1.33	1.65	1.33
Oct. 22 to 28	4.0	1.31	1.42	1.55	1.38	1.68	1.46
Average	....	1.31	1.36	1.58	1.44	1.72	1.38
Oct. 29 to Nov. 7	0	1.68	1.72	1.90	1.62	2.01	1.73
Average	....	1.68	1.72	1.90	1.62	2.01	1.73

EFFECT ON PHENOL AND AROMATIC OXY-ACIDS OF THE URINE.

For the detection of these substances the following method was pursued: Three hundred cubic centimeters of urine (day's urine diluted to 1800 c. c.) were acidified with 5 c. c. of dilute sulphuric acid (1:4) and subjected to steam distillation until 150 c. c. of distillate were obtained. In the heating with acid the combined phenol in the urine is broken up and the phenol allowed to pass over in the distillate. The distillate was tested for phenol with Millon's reagent and the results studied in a comparative way. There were no appreciable differences.

The distillation was then resumed and allowed to continue until 300 to 350 c. c. of liquid had been driven over. At this stage it was soon found that very little, if any, phenol remained in the distillation flask. The contents of the flask were then thoroughly shaken with 150 c. c. of ether for the removal of the aromatic oxy-acids. After evaporation of the ether the residue was extracted with 50 c. c. of boiling water, and the aqueous solution treated with Millon's reagent. A light rose to deep red color was taken as an indication of the presence of aromatic oxy-acids. The reactions were again studied as to their comparative intensities, and are indicated as 0, mild, moderate and strong.

As will be seen from the table, the results of the first three or four examinations for oxy-acids were negative. After that a slight or

moderate reaction was obtained until toward the end of the experiment, when the amounts of aromatic oxy-acids were considerably increased. The strong reactions were given soon after the close of the high benzoate period; and for six weeks these larger amounts were but slightly, if at all, reduced.

Phenol in the urine.

[S indicates slight, M moderate, and St strong reactions.]

Subject.	Nonbenzoate period.		First benzoate period.					Nonbenzoate period.	High benzoate period.				Nonbenzoate period.		
	July.		July.	August.		Sept.		Sept.	October.				November.		
	8.	19.	27.	12.	28.	10.	17.	24.	8.	15.	22.	28.	2.	6.	7.
H. H. G.	S	S	S	S	S	S	S	M	S	S	S	S	M	S	M
W. W. H.	S	0	S	S	S	S	S	S	S	S	St	S	M	S	S
L. M. L.	S	S	S	S	S	S	S	0	S	S	S	S	S	M	S
J. F. L.	S	S	S	S	S	S	S	0	S	S	S	S	S	S	S
E. C. M.	S	S	S	S	S	?	S	0	S	0	S	S	M	S	S
W. C. R.	S	S	S	S	S	?	0	S	?	S	S	S	S	S	S

Aromatic oxy-acids in the urine.

[S indicates slight, M moderate, and St strong reactions.]

Subject.	Nonbenzoate period.		First benzoate period.					Nonbenzoate period.	High benzoate. period.				Nonbenzoate period.					
	July.		July.	August.		Sept.		Sept.	October.				November.					Dec.
	8.	19.	27.	12.	28.	10.	17.	24.	8.	15.	22.	28.	2.	6.	7.	17.	24.	1.
H. H. G.	0	0	0	S	S	0	M	S	M	M	M	M	M	0	M	St	S	S
W. W. H.	0	0	?	0	S	0	S	0	S	M	M	M	M	S	M	St	0	M
L. M. L.	0	0	?	S	S	S	M	S	M	M	M	M	M	M	St	St	....	S
J. F. L.	0	0	0	0	S	0	S	S	S	M	M	0	M	M	S	St	St	St
E. C. M.	0	0	?	0	S	S	S	S	S	S	M	M	M	M	M	St	St	0
W. C. R.	0	0	0	0	S	S	S	S	M	M	M	M	M	M	S	St	St	S

Whether the presence of the aromatic oxy-acids in the urines is due to the benzoate administered is extremely questionable. A number of normal urines which were tested in the same manner gave widely different results. In some no reaction whatever could be obtained, while others gave a mild or even moderately strong reaction.

The persistence of the aromatic oxy-acids long after the close of the last benzoate period may possibly be due to causes other than the benzoate; or, if the benzoate does play some part, it may be explained on the hypothesis that after ingestion of the larger and repeated doses of sodium benzoate the latter is not eliminated at once, but is stored up in the body and gradually eliminated, partly as oxy-benzoic acid (an aromatic oxy-acid). This view, however, appears to us improbable. Further observations are being made in order to arrive at a more definite conclusion regarding these aromatic

oxy-acids. Finally, it should be emphasized that these acids occur in exceedingly small quantities, so that their presence, while interesting, presumably has no bearing upon the problem under consideration.

EFFECT ON THE HIPPURIC ACID OF THE URINE.

As stated in another connection, benzoic acid, benzoates, and benzoyl-containing radicals taken into the alimentary tract appear in the urine as hippuric acid. If the amount of benzoic acid introduced is large—more than sufficient to combine with the glycocoll present in the system to form hippuric acid—then other combinations are possible, such as benzoyl-glycuronic acid, which appears in the urine. It is rare to find benzoic acid itself uncombined or a salt of benzoic acid in the urine. In no one of our subjects was any trace of benzoic acid or benzoate found in the urine. Benzoyl-glycuronic acid is characterized by a strong reducing power. Examination of the daily urines of all the subjects, especially during the high benzoate period, failed to show any reducing power. Consequently, benzoyl-glycuronic acid could not have been present; certainly not to any extent. In other words, even with the larger doses of sodium benzoate, the benzoic acid given the subjects was eliminated, in large measure at least, through the urine as hippuric acid.

The normal urine of man practically always contains a certain amount of hippuric acid. This is due, in large measure at least, to the presence of benzoic acid or benzoyl-containing radicals in the food. Certain articles of food, such as various berries, plums and prunes, are relatively rich in benzoyl-containing radicals. It is therefore easy to arrange a diet in which considerable benzoic acid or benzoyl-containing groups may be introduced with the food.

On July 7 and 8, and again on July 22 and 23, all of the subjects were given a diet in which, so far as it was possible, benzoyl-containing substances were reduced to a minimum. Then, on July 9 and 10, the daily diet of each subject was especially constructed so as to contain considerable benzoic acid or benzoyl radicals by addition of raspberries, currants, and huckleberries. A table is appended showing the amount of benzoic acid (present as hippuric acid) in the urine of the individual subjects on certain dates designated. Likewise is shown the amount of benzoic acid added to the food when sodium benzoate was administered.

Attention is called, first, to the amount of benzoic acid obtained as hippuric acid through the urine on July 7 and 8, when the diet was freed as far as possible from benzoyl-containing articles. It will be noticed that on these two days the amount of benzoic acid per day, contained in the urine of the individual subjects as hippuric acid, varied from 0.058 gram to 0.303 gram. This means that under ordinary conditions of diet where fruits are eliminated there is a sufficient

amount of benzoyl-containing radicals in the food to give rise to an amount of hippuric acid equal to a maximum of 0.3 gram of benzoic acid per day. On July 9 and 10, however, when huckleberries, raspberries, and currants were added to the daily diet, the amount of benzoic acid obtained from the urine as hippuric acid rose to a maximum of 1.154 grams, with a minimum of 0.356 gram. In the majority of the subjects, however, the amount of benzoic acid in the urine each day as hippuric acid was between 0.8 and 0.9 gram.

On July 22 and 23, as stated, the daily diet was as free from benzoyl-containing compounds as it was possible to arrange it, but on these days 0.252 gram of benzoic acid was given as sodium benzoate. Study of the figures in the tables for benzoic acid obtained from the urine as hippuric acid shows that with the above dosage the output of benzoic acid in the urine per day for all six subjects was very much below the amount of benzoic acid obtained from the urine on July 9 and 10, when no sodium benzoate was administered, but with huckleberries, raspberries, and currants added to the diet. In fact, all through the first benzoate period when the amount of benzoic acid taken daily equaled 0.252 gram, the benzoic acid in the urine as hippuric acid never equaled the maximum figure obtained from the subjects when no benzoate was given, on a diet reinforced by huckleberries, currants, and raspberries. Reference to the food charts for July 9 and 10 shows that the quantity of these berries taken was not large, 155 grams of fresh huckleberries being perhaps the maximum per day. The inference, therefore, is that the amount of benzoyl-containing radicals naturally present in the food on July 9 and 10 was much larger than the amount of benzoic acid introduced with a daily dosage of 0.3 gram of sodium benzoate.

Study of the data in the appended table obtained during the second benzoate period when the dosage was still larger shows an output of benzoic acid as hippuric acid, more or less comparable to the amount of benzoic acid ingested. Thus, in the week of October 15 to 21 the daily intake of benzoic acid was 1.680 grams. The average daily output of benzoic acid as hippuric acid varied with the different subjects from 1.212 grams to 1.657 grams. Or taking the entire higher benzoate period of one month, when the average daily intake of benzoic acid was 1.596 grams, the average daily output of benzoic acid as hippuric acid for the different individuals ranged from 1.102 grams to 1.559 grams.

Finally, attention should be called to the fact that from October 29 to November 7, when sodium benzoate was no longer taken, the average daily output of benzoic acid in the form of hippuric acid varied in the different subjects from 1.251 grams to 1.700 grams, thus showing that the aromatic group introduced in the way indicated is somewhat slow in leaving the system.

Date.	Benzoic acid given as sodium benzoate per day.	Benzoic acid obtained from urine as hippuric acid per day.					
		H. H. G.	W. W. H.	L. M. L.	J. F. L.	E. C. M.	W. C. R.
	Grams.	Grams.	Grams.	Grams.	Grams.	Grams.	Grams.
July 7	0	0.141	0.134	0.162	0.248	0.303	0.174
July 8	0	.142	.065	.076	.142	.086	.058
July 9	0	1.154	.858	.674	.356	.933	.748
July 10	0	.784	.797	.851	.942	.979	.911
Average	....	.555	.463	.440	.422	.575	.473
July 22	.252	.233	.205	.239	.300	.118	.178
July 23	.252	.261	153	.167	.173	.190	.253
Average	.252	.247	.179	.203	.236	.154	.216
Aug. 10	.252	.147	.554	.597	.619	.545	.616
Aug. 11	.252	.298	.475	.568	.658	Lost.	.418
Average	.252	.223	.514	.582	.638	.545	.517
Aug. 24	.252	.084	.057	.169	.079	.442	.118
Aug. 25	.252	.429	.265	.594	.692	.671	.483
Aug. 26	.252	.680	.632	.796	.876	.946	.821
Aug. 27	.252	.582	.542	.428	.460	.364	.543
Average	.252	.441	.389	.497	.526	.606	.491
Aug. 31 to Sept. 3	.252	.410	.590	.451	.560	.617	.309
Sept. 7 to 13	.252	.295	.324	.311	.328	.320	.481
Sept. 14 to 20	.252	.626	.284	.880	.822	.749	.806
Average	.252	.443	.401	.547	.570	.562	.532
Sept. 21 to 30	0	.447	.294	.334	.334	.472	.404
Average	....	.447	.294	.334	.334	.472	.404
Oct. 1 to 7	.504	.550	.422	.618	.619	.431	.284
Oct. 8 to 14	.840	.566	.581	.841	.739	.608	.705
Oct. 15 to 21	1.680	1.486	1.355	1.467	1.212	1.330	1.657
Oct. 22 to 28	3.360	2.108	2.051	3.312	3.409	3.137	3.293
Average	1.596	1.177	1.102	1.559	1.494	1.376	1.484
Oct. 29 to Nov. 7	0	1.470	1.700	1.730	1.518	1.346	1.251
Average	....	1.470	1.700	1.730	1.518	1.346	1.251

EFFECT ON THE NITROGEN BALANCE.

As will be seen from examination of the tables showing the daily intake of nitrogen and the daily composition of the urine and feces, a nitrogen balance was struck at given periods, of seven or ten days, with all of the subjects. In the following tables the record of nitrogen balances for each individual is shown, giving the daily average intake of nitrogen in the food with the output of nitrogen through the urine and feces for the seventeen periods of the experiment, expressed in grams per day, together with the average nitrogen balance, likewise expressed in grams per day.

Examination of the results shows that on two occasions a minus nitrogen balance was obtained. The first case, that of W. W. H., occurred during the period of August 3 to August 9. This minus balance, averaging one gram per day, was due in large measure, without question, to the small intake of food incidental to an attack of coryza, which is mentioned under the head of "Clinical observa-

tions." The only other minus balance during the length of the experiment was in the case of W. C. R. in the latter part of the fore period, July 13 to 19, when the average daily nitrogen balance was −0.01 gram. In this case, as the figures indicate, the subject was practically in nitrogen equilibrium. Aside from these two cases all the subjects showed a plus nitrogen balance throughout the experiment. Critical survey of the data presented in the tables makes it quite clear that during the periods when the sodium benzoate was taken, whether the doses were small or large, there was no marked change in the nitrogen balance.

The daily average balance shows, it is true, some fluctuations, as might well be expected, but it is perfectly evident from the results that sodium benzoate does not have any specific effect upon the nitrogen metabolism of the body. If in some instances the plus balance seems smaller in those periods when benzoate was taken, it will be found on looking at the nitrogen intake for that period that in most cases the amount of nitrogen ingested was below that of the periods where the plus nitrogen balance was larger. In other words, the size of this plus nitrogen balance is governed mainly by the volume of nitrogenous or protein food ingested, and there is no influence apparent on the part of sodium benzoate in modifying the amount of this balance.

Taking into consideration all the data presented in connection with the urine, having in mind the quantitative changes of the different nitrogenous constituents, as well as the data covering the nitrogen intake and nitrogen output, it seems perfectly manifest that sodium benzoate in the doses taken by our subjects does not exert any appreciable influence upon those processes of nutrition which are ordinarily included under the term protein or nitrogen metabolism.

Nitrogen-balance, daily average.

SUBJECT H. H. G.

Date.	Daily dose of benzoate.	Nitrogen in food.	Nitrogen in urine.	Nitrogen in feces.	Nitrogen in urine and feces.	Nitrogen balance.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 12	0	15.28	12.59	1.65	14.24	+1.04
July 13 to 19	0	12.29	10.08	1.48	11.56	+ .73
July 20 to 26	.30	12.98	9.85	1.68	11.53	+1.45
July 27 to August 2	.30	11.76	9.49	1.11	10.60	+1.16
August 3 to 9	.30	11.88	8.27	1.36	9.63	+2.25
August 10 to 16	.30	12.00	8.83	1.21	10.04	+1.96
August 17 to 23	.30	10.58	8.56	1.46	10.02	+ .56
August 24 to 30	.30	10.87	8.10	1.19	9.29	+1.58
August 31 to September 6	.30	11.43	7.99	1.38	9.37	+2.06
September 7 to 13	.30	11.72	8.42	1.42	9.84	+1.88
September 14 to 20	.30	11.59	8.64	1.64	10.28	+1.31
September 21 to 30	0	11.14	8.53	1.08	9.61	+1.53
October 1 to 7	.60	10.64	8.54	1.33	9.87	+ .77
October 8 to 14	1.00	11.96	8.44	1.28	9.72	+2.24
October 15 to 21	2.00	10.57	8.74	1.00	9.74	+ .83
October 22 to 28	4.00	11.06	8.87	.92	9.79	+1.27
October 29 to November 7	0	11.82	9.27	1.06	10.33	+1.49

Nitrogen balance, daily average—Continued.

Date.	Daily dose of benzoate.	Nitrogen in food.	Nitrogen in urine.	Nitrogen in feces.	Nitrogen in urine and feces.	Nitrogen balance.
SUBJECT W. W. H.						
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 12	0	14.32	12.57	1.35	13.92	+0.40
July 13 to 19	0	12.68	11.06	1.50	12.56	+ .12
July 20 to 26	.30	12.98	10.14	1.48	11.62	+1.36
July 27 to August 2	.30	11.99	9.16	1.12	10.28	+1.71
August 3 to 9	.30	9.26	9.27	.99	10.26	—1.00
August 10 to 16	.30	12.05	9.68	1.01	10.69	+1.36
August 17 to 23	.30	10.79	8.22	1.17	9.39	+1.40
August 24 to 30	.30	11.54	7.76	1.38	9.14	+2.40
August 31 to September 6	.30	11.32	7.74	1.33	9.07	+2.25
September 7 to 13	.30	11.91	7.88	1.08	8.96	+2.95
September 14 to 20	.30	11.86	9.24	1.23	10.47	+1.39
September 21 to 30	0	11.31	8.35	.94	9.29	+2.02
October 1 to 7	.60	11.88	8.65	1.11	9.76	+2.12
October 8 to 14	1.00	12.06	8.39	1.24	9.63	+2.43
October 15 to 21	2.00	12.26	9.03	1.08	10.11	+2.15
October 22 to 28	4.00	11.58	8.91	1.10	10.01	+1.57
October 29 to November 7	0	11.41	8.88	1.06	9.94	+1.47
SUBJECT L. M. L.						
July 6 to 12	0	15.62	12.11	2.13	14.24	+1.38
July 13 to 19	0	14.94	11.27	1.74	13.01	+1.93
July 20 to 26	.30	14.76	11.74	1.88	13.62	+1.14
July 27 to August 2	.30	12.45	9.74	1.55	11.29	+1.16
August 3 to 9	.30	12.71	9.53	1.55	11.08	+1.63
August 10 to 16	.30	11.81	9.22	1.38	10.60	+1.21
August 17 to 23	.30	11.40	8.18	1.65	9.83	+1.57
August 24 to 30	.30	12.33	9.03	1.60	10.63	+1.70
August 31 to September 6	.30	12.19	8.58	1.49	10.07	+2.12
September 7 to 13	.30	13.14	9.32	1.50	10.82	+2.32
September 14 to 20	.30	13.14	9.89	1.40	11.29	+1.85
September 21 to 30	0	12.39	9.43	1.34	10.77	+1.62
October 1 to 7	.60	13.00	9.75	1.53	11.28	+1.72
October 8 to 14	1.00	13.32	9.66	1.68	11.34	+1.98
October 15 to 21	2.00	12.84	9.21	1.38	10.59	+2.25
October 22 to 28	4.00	11.69	9.08	1.32	10.40	+1.29
October 29 to November 7	0	13.23	9.85	1.36	11.21	+2.02
SUBJECT J. F. L.						
July 6 to 12	0	14.37	10.39	1.98	12.37	+2.00
July 13 to 19	0	13.05	9.49	1.67	11.16	+1.89
July 20 to 26	.30	14.58	9.12	1.79	10.91	+3.67
July 27 to August 2	.30	12.89	8.86	1.49	10.35	+2.54
August 3 to 9	.30	14.12	8.95	1.62	10.57	+3.55
August 10 to 16	.30	12.40	9.13	1.45	10.58	+1.82
August 17 to 23	.30	12.32	8.78	1.71	10.49	+1.83
August 24 to 30	.30	12.94	9.43	1.74	11.17	+1.77
August 31 to September 6	.30	12.62	8.81	1.54	10.35	+2.27
September 7 to 13	.30	13.10	9.06	1.68	10.74	+2.36
September 14 to 20	.30	13.15	10.00	1.61	11.61	+1.54
September 21 to 30	0	12.63	10.01	1.29	11.30	+1.33
October 1 to 7	.60	12.66	10.19	1.27	11.46	+1.20
October 8 to 14	1.00	11.93	10.19	1.53	11.72	+ .21
October 15 to 21	2.00	11.83	9.92	1.52	11.44	+ .39
October 22 to 28	4.00	11.29	9.49	1.07	10.56	+ .73
October 29 to November 7	0	13.08	9.38	1.51	10.89	+2.19

Nitrogen balance, daily average—Contiuued.

SUBJECT E. C. M.

Date.	Daily dose of benzoate.	Nitrogen in food.	Nitrogen in urine.	Nitrogen in feces.	Nitrogen in urine and feces.	Nitrogen balance.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	*Grams.*
July 6 to 12	0	15.69	12.46	1.75	14.21	+1.48
July 13 to 19	0	12.36	10.27	1.82	12.09	+ .27
July 20 to 26	.30	15.15	11.15	2.16	13.31	+1.84
July 27 to Aug. 2	.30	10.98	9.49	1.38	10.87	+ .11
Aug. 3 to 9	.30	13.02	9.55	1.81	11.36	+1.66
Aug. 10 to 16	.30	13.36	9.94	1.53	11.47	+1.89
Aug. 17 to 23	.30	12.42	9.51	1.67	11.18	+1.24
Aug. 24 to 30	.30	13.51	9.40	1.93	11.33	+2.18
Aug. 31 to Sept. 6	.30	12.73	9.72	1.77	11.49	+1.24
Sept. 7 to 13	.30	11.68	9.57	1.58	11.15	+ .53
Sept. 14 to 20	.30	12.13	10.08	1.17	11.25	+ .88
Sept. 21 to 30	0	12.28	9.83	1.33	11.16	+1.12
Oct. 1 to 7	.60	12.24	9.68	1.53	11.21	+1.03
Oct. 8 to 14	1.00	12.30	9.34	1.41	10.75	+1.55
Oct. 15 to 21	2.00	11.77	9.59	1.22	10.81	+ .96
Oct. 22 to 28	4.00	12.22	9.13	1.67	10.80	+1.42
Oct. 29 to Nov. 7	0	12.88	9.62	1.46	11.08	+1.80

SUBJECT W. C. R.

Date.	Daily dose of benzoate.	Nitrogen in food.	Nitrogen in urine.	Nitrogen in feces.	Nitrogen in urine and feces.	Nitrogen balance.
July 6 to 12	0	12.80	9.93	1.78	11.71	+1.09
July 13 to 19	0	10.32	8.70	1.63	10.33	− .01
July 20 to 26	.30	11.54	8.35	1.30	9.65	+1.89
July 27 to Aug. 2	.30	10.48	7.31	1.23	8.54	+1.94
Aug. 3 to 9	.30	10.74	7.98	1.30	9.28	+1.46
Aug. 10 to 16	.30	10.06	8.42	1.09	9.51	+ .55
Aug. 17 to 23	.30	11.08	7.95	1.48	9.43	+1.65
Aug. 24 to 30	.30	11.74	8.74	1.59	10.33	+1.41
Aug. 31 to Sept. 6	.30	10.70	7.84	1.23	9.07	+1.63
Sept. 7 to 13	.30	11.55	8.13	1.52	9.65	+1.90
Sept. 14 to 20	.30	11.90	8.76	1.31	10.07	+1.83
Sept. 21 to 30	0	11.18	8.58	1.24	9.82	+1.36
Oct. 1 to 7	.60	11.91	9.30	1.38	10.68	+1.23
Oct. 8 to 14	1.00	11.51	8.74	1.35	10.09	+1.42
Oct. 15 to 21	2.00	11.19	8.28	1.17	9.45	+1.74
Oct. 22 to 28	4.00	10.87	9.06	1.18	10.24	+ .63
Oct. 29 to Nov. 7	0	11.29	9.21	1.31	10.52	+ .77

GENERAL CONCLUSIONS.

Due consideration of all the data presented in the preceding pages, together with careful study of the individual data of the various tables of results, leads to the following general conclusions: Sodium benzoate, in small and large doses, up to a maximum of 4 grams per day, is without disturbing influence upon the general health of the individual, so far as can be seen from clinical observations. There was no attendant loss of body weight; neither was there any disturbance of digestion, assimilation, or utilization of either the fat or protein food. Indeed, the subjects of our experiment showed a gain of weight and even an improved condition of digestion during the period of the experiment in which the action of sodium benzoate was tested.

Again, there was no deleterious influence on the part of sodium benzoate upon the blood, either on the number of erythrocytes, leucocytes, or the hemoglobin content of the blood.

Upon the less tangible processes of metabolism as indicated by the quantitative study of the urine, etc., there is no indication of any marked action. No changes of any special significance were to be

noted during the period when sodium benzoate was fed even in large doses, aside from a slight effect on the reaction of the urine, so that the conclusion is obvious that sodium benzoate does not exert, in small or large doses, any pronounced influence upon the processes of metabolism or of nutrition.

Sodium benzoate is without effect upon the production of nitrogen balance. Throughout our experiment a plus nitrogen balance was easily maintained, and in such fashion as to clearly indicate that sodium benzoate does not exert any harmful or disturbing influence.

In our judgment, therefore, based on the character of the results obtained in this study of the action of sodium benzoate on the general health and nutrition of man, there is no suggestion of any pronounced effect whatever produced by the salt in such doses as we have employed. We are of the opinion that sodium benzoate, in small and large doses, up to a maximum of 4 grams per day, is no more harmful or provocative of disturbance of the human organism than corresponding amounts of sodium chloride or common salt.

This conclusion, while based entirely upon the results of our investigation, is in close harmony with what is known regarding the occurence of benzoyl-containing radicals in many natural products, which have long served as useful foods for mankind. As our results show, in harmony with well-known facts, the ordinary diet of man contains a sufficient amount of benzoic acid or kindred substances to give rise to appreciable quantities of hippuric acid in the urine. Further, huckleberries, cranberries, and other related fruits well recognized as noninjurious to health have in them amounts of benzoyl radicals sufficient to form quantities of hippuric acid in the urine larger than the small doses of sodium benzoate fed in our experiment; thus making it apparent that some natural foods at least contain quantities of benzoate, or related substances, in amount equal to what was fed in our daily dosage with sodium benzoate, and that the system is well inured to the presence of moderate quantities at least of this aromatic group.

Finally, it may be added that the results of our experimental study make it evident that the admixture of sodium benzoate with food does not lead to any reduction in the quality or strength of such food; neither is the food injuriously affected thereby when the salt is added in small quantities or in large quantities, up to a maximum of 4 grams per day. Were the contrary true, we should expect to find in our experimental results indications of either a disturbance of digestion, an inhibition of the normal power to digest and assimilate the food treated with sodium benzoate, together with a tendency toward the production of a minus nitrogen balance, with possible loss of body weight.

DAILY RECORDS OF URINE AND FECES OF THE INDIVIDUAL SUBJECTS, SHOWING CHEMICAL COMPOSITION, NITROGEN BALANCE, ETC., THROUGHOUT THE EXPERIMENT.

FORE PERIOD. SUBJECT H. H. G

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.[a]	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 6	......	640	1.027	12.40	10.58	0.49	0.090	0.111	0.468	......	0.66	0.889	0.724	0.021	0.144	0.80	18	8.28	2.27	132.6	47.6	64		
July 7	50.9	860	1.026	12.37	10.59	.42	.077	.151	.487	0.016	.64 / .66	......	.861	.043	......	.89	14	12.51	1.91	190.1	24.6	87		
July 8	......	890	1.029	12.00	10.49	.38	.080	.134	.435	.016	.46 / .48	.839	.693	.065	.081	.78	14	11.40	1.86	171.3	34.3	86		
July 9	......	900	1.028	13.07	11.10	.51	.059	.154	.442	.132	.67 / .80	.926	.769	.046	.111	.93	19	11.66	2.11	122.6	35.1	71	[b]4.93 / 11.56	[b]21.66 / 50.77
July 10	......	1,490	1.018	13.92	11.69	.55	.039	.171	.427	.090	.95 / 1.04	1.085	.878	.049	.158	.99	10	15.50	2.04	55.6	23.0	59		
July 11	51.0	1,170	1.019	11.88	10.32	.50	.079	.105	.442	......	.43	.949	.858	.040	.051	.91	15	11.44	2.00	165.7	58.0	65		
July 12	......	1,345	1.021	12.48	10.65	.50	.047	.203	.457	......	.62	.871	.739	.027	.105	.99	11	14.20	1.73	28.5	11.8	59		
Average	51.0	1,042	1.024	12.59	10.76	.48	.067	.147	.451	.064	.68 / .67	.927	.789	.042	.108	.90	14	12.14	1.99	126.6	33.5	70	1.65	7.25

[a] In the columns giving figures for undetermined nitrogen two figures appear against each day whenever hippuric acid nitrogen was determined, the lower figure in such cases taking no account of hippuric acid nitrogen.

[b] Per cent.

BALANCE.

		Grams.
Nitrogen in food		106.98
Nitrogen in excreta:		
Urine	88.12	
Feces	11.56	
		99.68
Nitrogen balance		+7.30

FORE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
July 13	....	795	1.024	11.16	9.62	0.65	0.060	0.134	0.464	....	0.24	0.713	0.584	0.054	0.075	0.88	21	10.00	1.86	162.9	33.5	79		
July 14	51.2	790	1.030	11.02	9.24	.58	.057	.161	.479	....	.50	.855	.629	.055	.171	.78	8	10.44	1.25	72.5	19.3	73		
July 15	....	880	1.019	9.96	8.52	.36	.059	.125	.420	....	.48	.763	.582	.060	.121	.78	50	9.00	1.18	156.2	31.6	80		{[b]14.58
July 16	....	1,255	1.015	10.80	9.25	.43	.034	.165	.453	....	.47	.751	.567	.063	.121	.90	11	11.52	1.61	124.2	34.6	72	{[a]5.17	{[c]13.04
July 17	51.7	1,065	1.021	10.31	8.60	.42	.024	.205	.424	....	.64	.855	.659	.040	.156	.79	20	12.24	1.41	51.2	12.3	76	{10.35	{[d]17.35
July 18	....	730	1.021	8.64	7.58	.30	.047	.153	.424	....	.14	.700	.493	.053	.154	.68	28	10.44	1.36	91.0	24.1	74		{26.11
July 19	....	725	1.024	8.64	7.08	.37	.065	.122	.453	..	.55	.690	.456	.032	.201	.58	13	10.44	1.22	143.2	44.8	69		
Average	51.5	891	1.022	10.08	8.56	.44	.049	.166	.445		.43	.761	.567	.051	.143	.77	22	10.78	1.41	114.5	28.6	75	1.48	{[d]4.34 {3.73

[a] Per cent. [b] Per cent July 13-17. [c] Per cent July 13-20. [d] July 13-17.

BALANCES.

		Grams.
Nitrogen in food		86.01
Nitrogen in excreta:		
Urine	70.53	
Feces	10.35	
		80.88
Nitrogen balance		+5.13

	Grams.
Ether extract in food	431.25
Ether extract in feces	17.35
Fat utilized	413.90

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine.																		Feces.				
																				Weight.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Moist.	Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 20	51.5	640	1.024	9.72	8.19	0.35	0.044	0.131	0.453	......	0.55	0.815	0.575	0.065	0.175	0.64	34	8.46	1.59	108.0	23.5	78		
July 21	......	840	1.020	11.93	10.16	.45	.051	.154	.468	......	.65	.759	.565	.062	.132	.73	15	9.18	1.84	100.0	19.7	80		
July 22	......	820	1.024	9.77	8.12	.41	.047	.153	.505	0.027	.48 .51	.714	.561	.048	.135	.84	8	11.70	2.00	90.5	23.6	74		
July 23	52.2	820	1.024	9.50	8.06	.37	.044	.140	.446	.030	.38 .41	.669	.564	.051	.054	.75	12	13.32	1.25	244.0	35.8	85	[a]6.05 10.77	[a]10.75 19.14
July 24	......	840	1.016	8.91	7.35	.37	.031	.151	.472	......	.53	.645	.485	.043	.117	.76	71	9.90	1.61	196.6	34.3	83		
July 25	52.1	1,210	1.013	9.72	8.19	.45	.033	.144	.442	......	.47	......	.538	.052	......	.71	11	11.70	1.68	9.0	2.6	71		
July 26	......	1,260	1.018	9.40	7.99	.41	.029	.151	.461	......	.36	.737	.548	.040	.149	.75	Trace.	11.42	1.59	99.7	38.5	61		
Average	51.9	919	1.020	9.85	8.29	.40	.040	.146	.464	.029	43 .50	.728	.548	.052	.126	.74	25	10.81	1.65	121.1	26.9	76	1.68	2.73

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		90.87
Nitrogen in excreta:		
Urine	68.95	
Feces	10.77	
		79.72
Nitrogen balance		+11.15

FIRST BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. NH_3 nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Total acidity as oxalic acid.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.	Feces. Total nitrogen.	Feces. Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 27	52.0	680	1.019	9.50	7.97	0.40	0.026	0.152	0.472	.....	0.48	0.751	0.565	0.049	0.140	0.73	24	9.00	1.32	28.5	5.8	80		
July 28		660	1.023	9.02	7.76	.44	.020	.142	.468	.....	.19	.669	.457	.056	.156	.73	13	8.10	1.11	128.3	33.6	71		
July 29	51.9	820	1.018	9.94	8.54	.31	.035	.145	.453	.....	.46	.682	.514	.056	.112	.70	17	9.54	1.18	37.0	9.8	71		
July 30		1,520	1.012	9.91	8.45	.41	.035	.136	.442	.....	.47	.805	.593	.048	.162	.72	22	11.88	1.61	83.5	25.0	70	[a]6.08	[a]13.06
July 31		730	1.023	9.23	7.64	.36	.017	.165	.472	.....	.58	.855	.621	.058	.174	.67	22	10.98	1.22	47.5	12.3	71	7.78	16.70
August 1	52.4	1,250	1.013	9.72	8.21	.43	.038	.144	.442	.....	.46	.682	.486	.065	.131	.70	22	12.96	1.27	74.3	20.8	72		
August 2		1,540	1.014	9.07	7.75	.45	.034	.135	.442	.....	.26	.727	.510	.060	.157	.68	21	12.42	1.32	67.1	20.6	69		
Average	52.1	1,029	1.017	9.49	8.05	.40	.029	.146	.456	.....	.42	.739	.535	.056	.147	.70	20	10.70	1.29	66.6	18.3	73	1.11	2.39

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		82.30
Nitrogen in excreta:		
Urine	66.42	
Feces	7.78	
		74.20
Nitrogen balance		+8.10

	Grams.
Ether extract in food	749.99
Ether extract in feces	16.70
Fat utilized	733.29

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 3	52.1	840	1.016	8.37	6.56	0.41	0.094	0.101	0.461	......	0.74	0.702	0.498	0.054	0.150	0.66	25	9.18	1.45	66.1	11.2	83		
August 4	......	740	1.023	8.26	7.01	.28	.038	.169	.457	......	.31	.608	.415	.049	.144	.71	16	10.62	1.00	54.0	15.1	72		
August 5	52.7	840	1.020	8.69	7.17	.44	.052	.121	.483	......	.43	.648	.466	.054	.128	.66	19	9.54	1.32	83.2	22.7	73	a5.93	a 11.42
August 6	......	800	1.018	9.18	7.55	.39	.038	.153	.509	......	.54	.716	.511	.047	.158	.66	7	11.16	1.43	99.1	27.4	72	9.52	18.34
August 7	......	920	1.020	7.99	6.45	.36	.017	.163	.450	......	.55	.593	.456	.041	.096	.66	10	12.60	1.18	232.7	33.1	86		
August 8	53.0	1,150	1.016	7.02	5.80	.30	.043	.123	.442	......	.32	.554	.392	.041	.121	.64	11	13.50	1.02	33.0	9.0	73		
August 9	......	2,375	1.010	8.35	6.91	.43	.060	.108	.439	......	.40	.626	.463	.051	.112	.56	10	18.48	1.27	127.1	42.1	67		
Average	52.6	1,095	1.018	8.27	6.78	.37	.049	.124	.463	......	.47	.635	.457	.048	.130	.65	14	12.15	1.24	99.3	22.9	75	1.36	2.62

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		83.18
Nitrogen in excreta:		
Urine	57.86	
Feces	9.52	
		67.38
Nitrogen balance		+15.80

FIRST BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Folin's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 10	52.6	680	1.023	7.83	6.44	0.37		0.103	0.453	0.017	..	0.638	0.489	0.058	0.091	0.62	31	8.64	1.45	41.0	10.8	74		
August 11		700	1.020	9.34	8.18	.30		.111	.434	.034	..	.656	.484	.048	.124	.62	16	7.92	1.22	208.9	29.0	86		
August 12	52.7	830	1.017	8.64	7.41	.31	0.007	.110	.483		0.32	.649	.437	.030	.151	.73	Trace	7.92	1.68	26.5	6.2	77		
August 13		700	1.020	8.10	6.76	.37	.061	.128	.528		.26	.682	.479	.048	.155	.64	22	9.45	1.63	65.4	15.9	76	a6.28	a14.20
August 14		940	1.023	10.09	8.62	.29	.022	.196	.483		.48	.789	.603	.043	.143	.66	18	13.68	1.36	220.1	31.8	86	8.47	19.16
August 15	53.2	1,060	1.021	9.40	8.04	.28	.034	.166	.468		.41	.665	.474	.050	.141	.65	12	15.12	1.18	88.3	27.8	61		
August 16		1,790	1.010	8.42	6.73	.56	.071	.176	.453		.43	.700	.480	.063	.157	.64	10	14.22	2.00	44.8	13.4	70		
Average	52.8	957	1.019	8.83	7.45	.35	.039	.141	.472	.026	.38	.678	.492	.049	.137	.65	18	10.99	1.50	99.3	19.3	76	1.21	2.74

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		84.05
Nitrogen in excreta:		
Urine	61.82	
Feces	8.47	
		70.29
Nitrogen balance		+13.76

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 17	53.0	1,070	1.018	9.40	7.96	0.30	0.036	0.187	0.468	......	0.45	0.627	0.471	0.062	0.094	0.64	39	11.52	1.20	31.7	7.8	75		
August 18	......	1,220	1.016	8.04	6.60	.26	.028	.152	.487	......	.51	.581	.390	.048	.143	.65	15	12.06	1.22	72.5	26.4	63		
August 19	53.6	1,320	1.019	7.99	6.72	.25	.047	.121	.468	......	.39	.682	.490	.087	.105	.66	17	10.98	1.41	56.1	15.2	72		
August 20	......	980	1.016	8.10	6.83	.25	.052	.101	.442	......	.42	.685	.500	.044	.141	.62	7	11.34	1.18	78.6	21.1	73	a6.55	a13.24
August 21	......	1,210	1.015	8.64	7.39	.23	.023	.148	.450	......	.40	.661	.488	.048	.125	.66	9	9.18	1.25	61.4	17.9	70	10.20	20.61
August 22	52.9	1,060	1.015	8.64	7.21	.24	.036	.144	.491	......	.52	.581	.440	.039	.102	.62	11	9.36	1.27	60.7	17.7	70		
August 23	......	2,085	1.012	9.11	7.71	.34	.041	.148	.442	......	.43	.656	.468	.034	.154	.62	Trace	13.86	1.64	120.2	49.6	58		
Average	53.2	1,278	1.016	8.56	7.20	.27	.038	.143	.464	......	.45	.639	.464	.052	.123	.64	16	11.19	1.31	68.7	22.2	69	1.46	2.94

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		74.06
Nitrogen in excreta:		
Urine	59.92	
Feces	10.20	
		70.12
Nitrogen balance		+ 3.94

	Grams.
Ether extract in food	654.73
Ether extract in feces	20.61
Fat utilized	634.12

FIRST BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 24	52.9	1,270	1.015	9.12	7.71	0.39	0.028	0.154	0.476	0.010	0.45 / .46	0.707	0.520	0.054	0.133	0.62	21	10.08	1.56	19.1	5.0	74		
August 25		1,000	1.015	8.80	7.45	.38	.028	.143	.479	.048	.27 / .32	.684	.503	.050	.131	.68	7	10.08	1.59	84.0	20.4	76		
August 26	52.9	1,390	1.015	8.80	7.53	.30	.042	.140	.453	.078	.26 / .34	.618	.458	.051	.109	.66	9	10.62	1.34	32.2	9.2	71	a6.53 / 8.36	a10.30 / 13.18
August 27		1,460	1.013	8.10	6.80	.32	.035	.140	.442	.067	.30 / .37	.638	.456	.055	.128	.68	18	10.80	1.54	84.3	23.7	72		
August 28		910	1.018	7.50	6.33	.26	.023	.141	.461		.29	.536	.410			.63	15	9.36	1.04	174.4	29.6	83		
August 29	53.2	860	1.018	7.45	6.25	.17	.028	.135	.453		.41	.535	.401	.081	.053	.60	7	12.24	.95	21.3	6.1	71		
August 30		1,400	1.012	6.91	5.44	.39	.059	.092	.435		.19	.559	.429	.049	.081	.59	Trace	12.06	1.50	121.5	34.0	72		
Average	53.0	1,184	1.017	8.10	6.79	.32	.035	.135	.457	.051	.32 / .38	.606	.454	.057	.106	.64	13	10.75	1.36	76.7	18.3	74	1.19	1.88

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		76.06
Nitrogen in excreta:		
Urine	56.68	
Feces	8.36	
		65.04
Nitrogen balance		+11.02

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	URINE.																		FECES.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 31	53.2	540	1.025	8.42	7.08	0.37	0.050	0.110	0.520	0.047	0.24 / .29	0.529	0.446	0.042	0.041	0.63	26	6.66	1.70	28.6	7.6	73		
September 1	......	1,060	1.015	9.18	7.99	.32	......	.134	.491	.047	......	.566	.404	.052	.110	.62	18	9.72	1.22	63.0	14.9	76		
September 2	53.7	1,160	1.017	8.04	6.39	.36	.037	.125	.453	.047	.60 / .64	.623	.459	.033	.130	.62	Trace	11.34	1.27	186.2	25.2	86	a 6.99 / 9.66	a 11.81 / 16.32
September 3	......	1,940	1.012	7.44	5.88	.36	.046	.124	.453	.047	.53 / .58	.569	.384	.048	.137	.61	9	14.20	1.39	203.9	34.3	83		
September 4	......	1,660	1.013	6.75	5.63	.31	.031	.135	.453	......	.20	......	.404	.044	......	.63	11	12.24	1.20	91.5	21.2	77		
September 5	53.7	880	1.020	7.45	5.96	.30	.040	.133	.479	......	.54	.497	.424	.051	.022	.59	19	12.24	1.20	115.4	27.0	77		
September 6	......	1,640	1.010	8.64	6.98	.37	.067	.133	.416	......	.67	.546	.420	.036	.087	.66	8	11.34	1.54	30.9	8.0	74		
Average	53.5	1,269	1.016	7.99	6.56	.34	.045	.128	.466	.047	.46 / .49	.555	.420	.044	.088	.62	15	11.11	1.36	102.6	19.7	78	1.38	2.33

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		80.01
Nitrogen in excreta:		
Urine	55.92	
Feces	9.66	
		65.58
Nitrogen balance		+14.43

FIRST BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
September 7	53.6	1,390	1,015	8.32	7.12	0.28	0.049	0.164	0.472	0.034	0.20 / .23	0.524	0.436	0.056	0.032	0.69	11	12.78	1.18	187.2	34.0	82		
September 8	......	940	1.020	7.72	6.53	.27	.045	.157	.498	.034	.19 / .22	.593	.407	.050	.136	.68	17	15.03	1.09	226.5	23.5	90		
September 9	53.7	950	1.013	7.72	6.56	.41	.048	.121	.476	.034	.07 / .10	.576	.424	.032	.120	.66	Trace	12.42	1.45	141.8	19.7	79		
September 10	......	1,000	1.018	8.15	6.73	.35	.041	.146	.535	.034	.31 / .34	.605	.479	.045	.081	.72	11	13.32	1.43	67.1	10.5	84	a6.59 / 9.95	a 11.53 / 17.41
September 11	......	1,070	1.018	9.18	7.94	.38	.032	.154	.479	.034	.16 / .19	.621	.492	.048	.080	.74	12	11.16	1.43	38.5	11.3	71		
September 12	53.9	1,120	1.017	8.75	7.48	.35	.050	.146	.461	.034	.23 / .26	.509	.379	.097	.033	.67	9	10.62	1.32	67.4	16.7	75		
September 13	......	1,620	1.014	9.07	7.46	.48	.034	.146	.453	.034	.46 / .49	......	.447	.045	......	.64	11	15.84	1.54	146.1	35.3	76		
Average	53.7	1,156	1.016	8.42	7.12	.36	.043	.148	.482	.034	.23 / .26	.571	.438	.053	.080	.69	12	13.02	1.35	124.9	21.6	80	1.42	2.49

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		82.07
Nitrogen in excreta:		
Urine	58.91	
Feces	9.95	
		68.86
Nitrogen balance		+13.21

	Grams.
Ether extract in food	838.79
Ether extract in feces	17.41
Fat utilized	821.38

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT, H. H. G.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 14	54.1	1,075	1.017	9.72	8.15	0.49	0.051	0.169	0.461	0.072	0.32 .39	0.638	0.519	0.055	0.064	0.66	9	12.96	1.63	142.9	20.8	85		
September 15	......	1,340	1.010	8.75	7.25	.42	.040	.176	.483	.072	.31 .38	.560	.412	.050	.098	.73	9	12.60	1.59	68.9	15.6	77		
September 16	53.8	1,200	1.018	7.88	6.42	.44	.053	.149	.487	.072	.26 .33	.576	.436	.048	.092	.71	9	11.70	1.66	67.9	18.3	73		
September 17	......	890	1.021	8.53	6.96	.39	.046	.149	.535	.072	.38 .45	.647	.453	.052	.142	.67	7	11.34	1.13	146.4	26.2	82	[a]6.75 11.48	[a]12.81 21.78
September 18	......	1,200	1.015	8.64	7.18	.38	.033	.145	.442	.072	.39 .46	.607	.503	.056	.048	.65	15	14.04	1.27	46.2	12.3	73		
September 19	54.3	720	1.021	8.10	6.67	.35	.049	.119	.457	.072	.38 .45	.556	.442	.041	.073	.65	9	10.62	1.25	76.6	15.3	80		
September 20	......	1,820	1.013	8.88	7.19	.43	.058	.128	.465	.072	.54 .61	.533	.421	.031	.081	.67	Trace.	14.40	1.64	243.8	61.5	75		
Average	54.1	1,178	1.016	8.64	7.12	.41	.047	.148	.476	.072	.37 .44	.588	.455	.048	.086	.68	10	12.52	1.45	113.2	24.3	78	1.64	3.11

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		81.02
Nitrogen in excreta:		
Urine	60.50	
Feces	11.48	
		71.98
Nitrogen balance		+9.04

FIRST AFTER PERIOD. SUBJECT, H. H. G.

Date.	Urine.																			Feces.				
	Body weight.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 21	54.5	1,040	1.016	7.93	6.54	0.37	0.033	0.117	0.509	0.037	0.32 .36	0.616	0.495	0.043	0.078	0.64	6	9.27	1.22	16.8	4.3	74		
September 22	....	920	1.021	8.80	7.65	.29	.052	.141	.502	.037	.13 .17	.648	.497	.042	.109	.71	Trace.	12.06	1.16	46.0	14.6	68		
September 23	55.0	1,080	1.016	8.64	7.40	.38	.053	.129	.457	.037	.18 .22	.591	.467	.054	.070	.69	10	12.60	1.34	84.3	26.6	68		
September 24	.....	1,100	1.019	8.86	7.43	.40	.040	.144	.483	.037	.33 .37	.585	.454	.045	.086	.77	Trace.	11.43	1.61	35.0	6.5	81		
September 25	.....	1,060	1.019	8.53	6.97	.43	.031	.153	.498	.037	.41 .45	.593	.455	.050	.088	.73	Trace.	12.78	1.47	27.4	7.2	73	[a]6.71 10.84	[a]13.10 21.19
September 26	54.7	1,020	1.021	8.86	7.32	.35	.054	.162	.535	.037	.40 .44	.616	.469	.065	.082	.68	Trace.	12.78	1.16	57.3	17.6	69		
September 27	.....	1,240	1.017	8.53	7.23	.39	.078	.097	.457	.037	.24 .28	.524	.436	.041	.047	.65	Trace.	13.14	1.18	105.7	26.7	74		
September 28	54.2	680	1.026	8.15	6.89	.29	.050	.123	.479	.037	.28 .32	.628	.479	.048	.100	.63	10	10.44	1.32	39.6	11.0	72		
September 29	.....	960	1.020	8.75	7.44	.23	.044	.149	.472	.037	.38 .42	.485	.365	.054	.066	.70	9	9.81	1.16	87.9	22.1	74		
September 30	54.4	840	1.020	8.21	6.91	.32	.035	.125	.479	.037	.31 .35	.580	.469	.035	.076	.69	7	10.44	1.43	157.6	25.0	84		
Average	54.6	994	1.020	8.53	7.18	.35	.047	.134	.487	.037	.30 .34	.587	.459	.048	.080	.69	8	11.48	1.31	65.8	16.2	74	1.08	2.12

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		111.48
Nitrogen in excreta:		
Urine	85.26	
Feces	10.84	
		96.10
Nitrogen balance		+15.38

	Grams.
Ether extract in food	1,085.53
Ether extract in feces	21.19
Fat utilized	1,064.34

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT, H. H. G.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 1	......	1,500	1.013	8.53	7.20	0.36	0.050	0.136	0.491	0.063	0.22 .28	0.480	0.384	0.039	0.057	0.77	Trace.	10.08	1.47	56.9	14.7	74		
October 2	......	580	1.023	7.99	6.69	.44	.045	.112	.483	.063	.16 .22	.564	.459	.059	.042	.63	25	7.02	1.54	105.8	13.7	87		
October 3	54.4	800	1.020	9.40	7.71	.39	.057	.148	.505	.063	.53 .59	.581	.466	.047	.068	.68	11	10.08	1.50	36.3	10.3	71		
October 4	......	1,440	1.017	8.96	7.37	.45	.032	.159	.476	.063	.41 .47	.586	.460	.033	.094	.68	9	15.30	1.25	119.3	30.6	74	*a*6.48 8.31	*a* 11.59 14.87
October 5	54.2	870	1.021	8.26	6.73	.45	.041	.132	.483	.063	.36 .42	.596	.507	.050	.039	.66	Trace.	10.80	1.66	78.1	20.8	73		
October 6	......	820	1.026	8.42	6.88	.30	.036	.162	.498	.063	.48 .54	.571	.460	.043	.068	.74	Trace.	12.78	1.11	141.3	16.0	88		
October 7	54.5	890	1.025	8.20	6.72	.36	.041	.143	.479	.063	.39 .45	.541	.415	.063	.060	.68	9	13.41	1.16	82.1	22.2	72		
Average	54.4	986	1.021	8.54	7.04	.39	.043	.142	.488	.063	.38 .44	.560	.450	.048	.061	.69	14	11.35	1.38	88.5	18.3	77	1.33	2.12

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		74.53
Nitrogen in excreta:		
Urine	59.76	
Feces	8.31	
		68.07
Nitrogen balance		+6.46

SECOND BENZOATE PERIOD. SUBJECT, H. H. G.

Date.	Body weight.	URINE.																		FECES.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 8		922	1.023	8.53	7.04	0.41	0.052	0.121	0.476	0.065	0.37 / .44	0.551	0.439	0.048	0.064	0.63	9	11.34	1.22	62.9	14.0	77		
October 9		1,520	1.015	8.37	7.03	.37	.051	.126	.442	.065	.29 / .36	.566	.473	.044	.049	.62	Trace.	14.04	1.25	212.5	30.8	85		
October 10	54.7	1,390	1.015	8.10	6.76	.37	.049	.144	.517	.065	.20 / .27	.541	.457	.044	.040	.63	Trace.	14.40	1.25	168.6	24.0	85		
October 11		1,640	1.019	8.21	6.80	.43	.029	.151	.517	.065	.22 / .29	.522	.440	.034	.048	.67	Trace.	14.76	1.45				[a]6.91 / 8.94	[a]10.21 / 13.21
October 12	54.6	1,060	1.020	8.53	7.12	.44	.028	.152	.531	.065	.20 / .27	.611	.473	.050	.088	.68	Trace.	12.42	1.47	41.8	12.4	70		
October 13		980	1.016	8.86	7.20	.46	.021	.154	.476	.065	.48 / .55	.635	.480	.054	.101	.71	29	11.34	1.50	62.2	18.2	70		
October 14	54.3	1,150	1.019	8.47	6.80	.43	.016	.146	.491	.065	.52 / .59	.571	.423	.051	.097	.68	11	11.79	1.34	200.5	30.0	85		
Average	54.5	1,237	1.018	8.44	6.96	.42	.035	.142	.493	.065	.33 / .40	.571	.455	.046	.070	.66	16	12.87	1.35	106.9	18.5	79	1.28	1.89

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		83.77
Nitrogen in excreta:		
Urine	59.07	
Feces	8.94	
		68.01
Nitrogen balance		+15.76

	Grams.
Ether extract in food	777.02
Ether extract in feces	13.21
Fat utilized	763.81

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT, H. H. G.

Date.	Body weight.	Urine. Volume.	pecific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 15	......	880	1.025	7.61	6.00	0.42	0.039	0.138	0.505	0.171	0.34 / .51	0.515	0.403	0.047	0.065	0.59	Trace.	14.04	1.20	92.7	8.6	90		
October 16	......	920	1.023	8.21	6.86	.32	.023	.137	.491	.171	.21 / .38	.574	.457	.052	.063	.60	Trace.	14.94	1.04	98.1	16.8	82		
October 17	54.5	960	1.020	8.96	7.33	.39	.018	.162	.472	.171	.42 / .59	.648	.510	.047	.091	.60	Trace.	11.16	1.20	29.4	7.9	73		
October 18	......	1,400	1.017	10.04	8.46	.35	.018	.168	.502	.171	.37 / .54	.625	.494	.028	.103	.69	Trace.	13.36	1.27	29.9	8.7	70	a7.08 / 6.99	a 11.92 / 11.77
October 19	53.6	700	1.020	9.18	7.56	.38	.036	.148	.487	.171	.40 / .57	.616	.471	.063	.082	.62	18	8.73	1.27	136.1	25.7	81		
October 20	......	1,190	1.019	8.75	7.08	.37	.025	.143	.483	.171	.48 / .65	.504	.369	.055	.080	.56	10	11.16	1.16	43.8	14.0	68		
October 21	53.7	1,080	1.020	8.42	6.81	.37	.019	.165	.517	.171	.37 / .54	.714	.519	.049	.149	.70	11	14.04	1.32	62.0	17.0	72		
Average	53.9	1,019	1.021	8.74	7.16	.37	.025	.152	.494	.171	.37 / .54	.599	.460	.049	.090	.62	13	12.48	1.21	70.3	14.1	77	1.00	1.68

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		74.01
Nitrogen in excreta:		
Urine	61.17	
Feces	6.99	
		68.16
Nitrogen balance		+5.85

SECOND BENZOATE PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 22	......	880	1.023	8.75	6.92	0.48	0.027	0.121	0.472	0.260	0.47 .73	0.611	0.448	0.060	0.103	0.62	9	11.25	1.34	33.6	4.9	85		
October 23	......	860	1.020	8.80	7.07	.49	.037	.113	.476	.260	.35 .61	.633	.489	.056	.089	.60	Trace.	8.64	1.59	32.9	9.4	71		
October 24	53.8	800	1.025	8.64	6.84	.35	.042	.140	.531	.260	.48 .74	.583	.313	.....	.069	.66	Trace.	11.16	1.04	57.1	16.2	71		
October 25	......	1,680	1.015	8.96	7.10	.41	.025	.128	.453	.260	.58 .84	.556	.403	.036	.117	.66	Trace.	12.06	1.16	60.9	12.6	95	a 6.38 6.44	a 13.44 13.57
October 26	53.7	1,000	1.020	8.80	7.00	.40	.047	.131	.476	.260	.49 .75	.682	.497	.062	.123	.67	9	9.00	1.32	120.3	25.5	78		
October 27	......	960	1.020	9.07	7.20	.30	.039	.121	.483	.260	.67 .93	.604	.443	.045	.116	.65	11	10.08	1.11	71.1	20.0	71		
October 28	53.9	1,280	1.015	9.07	7.15	.46	.026	.118	.450	.260	.61 .87	.628	.499	.047	.082	.63	14	9.18	1.61	48.7	12.4	74		
Average	53.8	1,066	1.018	8.87	7.04	.41	.035	.127	.477	.260	.52 .78	.614	.442	.044	.098	.64	11	10.18	1.31	60.7	15.9	78	.92	1.94

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		77.44
Nitrogen in excreta:		
Urine	62.09	
Feces	6.44	
		68.53
Nitrogen balance		+8.91

	Grams.
Ether extract in food	812.75
Ether extract in feces	13.57
Fat utilized	799.18

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FINAL AFTER PERIOD. SUBJECT H. H. G.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 29	......	1,430	1.015	7.93	6.47	0.39	0.011	0.131	0.450	0.170	0.31 .48	0.644	0.510	0.045	0.089	0.61	11	12.60	1.56	48.8	14.8	69		
October 30	......	720	1.020	8.10	6.72	.36	.023	.136	.453	.170	.24 .41	.608	.489	.053	.066	.68	8	10.08	1.45	23.6	6.6	72		
October 31	53.9	1,200	1.020	9.94	8.38	.39	......	.180	.531	.170	......	.635	.493	.051	.089	.76	Trace.	14.94	1.50	34.6	9.6	72		
November 1	......	1,480	1.015	8.96	7.52	.26	.025	.135	.442	.170	.41 .58	.608	.481	.041	.086	.68	Trace.	12.42	1.72	55.0	12.9	76		
November 2	53.8	780	1.022	8.42	7.32	.29	.034	.128	.472	.170	.01 .18	.663	.506	.060	.097	.63	28	8.28	1.41	168.7	38.3	77	a6.78	b13.07 c13.36
November 3	......	840	1.023	8.47	6.98	.37	.024	.133	.491	.170	.30 .47	.588	.462	.053	.073	.68	13	9.18	1.61	28.4	4.4	85	10.58	d20.60 e10.74 f9.86
November 4	54.0	1,130	1.021	10.15	8.51	.40	.025	.152	.498	.170	.40 .57	.766	.621	.050	.095	.67	14	14.04	1.66	77.2	15.0	80		
November 5	......	1,100	1.022	9.66	8.12	.41	.016	.153	.487	.170	.30 .47	.672	.543	.059	.070	.68	14	14.22	2.02	42.4	13.8	67		
November 6	......	1,180	1.017	10.48	8.86	.43	.026	.154	.491	.170	.35 .52	.665	.532	.062	.071	.69	11	12.96	1.86	......	......	......		
November 7	53.9	1,060	1.022	10.58	9.10	.40	.042	.160	.502	.170	.21 .38	.681	.525	.074	.082	.70	11	12.96	2.02	122.6	40.6	66		
Average	53.9	1,092	1.020	9.27	7.80	.37	.025	.146	.482	.170	.28 .45	.653	.516	.055	.082	.68	14	12.17	1.68	60.1	15.6	74	1.06	e2.15 f1.97 d2.06

a Per cent. b Per cent October 29–November 3. c Per cent November 3–8. d October 29–November 8. e October 29–November 3. f November 3–8.

BALANCES.

		Grams.
Nitrogen in food		118.16
Nitrogen in excreta:		
Urine	92.69	
Feces	10.58	
		103.27
Nitrogen balance		+14.89

	Grams.
Ether extract in food	558.17
Ether extract in feces	9.86
Fat utilized	548.31

FORE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 6	......	800	1.022	12.10	10.24	0.45	0.066	0.173	0.513	......	0.66	0.831	0.694	0.080	0.057	0.71	83	8.28	2.00	......	34.0	......		
July 7	51.1	800	1.025	13.28	11.47	.41	.085	.165	.494	0.015	.65 .66	.....	.866	.076	.....	.72	95	8.37	1.93	109.6	31.9	71		
July 8	......	925	1.022	12.24	10.57	.47	.047	.195	.453	.007	.50 .51	.854	.735	.063	.056	.88	56	12.00	2.92	146.7	42.0	71	[a]4.41	[a]17.41
July 9	......	1,110	1.023	13.33	11.42	.46	......	.257	.502	.100	......	.932	.822	.056	.054	1.15	67	13.97	2.38	164.0	35.5	79	9.46	37.36
July 10	......	1,050	1.024	12.48	10.38	.54	.012	.218	.472	.092	.77 .86	.909	.785	.058	.066	1.05	31	13.90	2.21	68.3	17.7	74		
July 11	51.5	1,160	1.022	12.41	10.80	.42	.043	.179	.461	......	.51	.906	.753	.056	.097	1.03	38	15.18	2.05	138.3	41.3	70		
July 12	......	1,335	1.020	12.12	10.46	.34	.014	.218	.535	......	.55	.857	.726	.026	.105	1.02	35	14.40	1.41	49.7	12.2	75		
Average	51.3	1,026	1.023	12.57	10.76	.44	.045	.201	.490	.054	[b].65 [c].59	.882	.769	.039	.073	.94	58	12.59	2.13	112.8	30.7	73	1.35	5.34

[a] Per cent. [b] 4 days. [c] 6 days.

BALANCE.

		Grams.
Nitrogen in food		100.29
Nitrogen in excreta:		
Urine	87.96	
Feces	9.46	
		97.42
Nitrogen balance		+2.87

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FORE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 13	......	880	1.020	11.34	9.82	0.62	0.040	0.156	0.502	......	0.20	0.720	0.634	0.065	0.021	0.93	62	8.20	2.27	67.0	22.3	67		
July 14	51.3	1,040	1.021	11.77	10.03	.50	.013	.208	.509	......	.51	.832	.677	.055	.100	.93	67	11.52	1.66	90.0	23.2	74		b10.90
July 15	......	1,160	1.019	11.34	9.79	.23	.013	.183	.487	......	.64	.791	.623	.043	.125	.89	45	11.40	1.11	87.7	24.0	73	a4.98	c10.43
July 16	......	1,120	1.020	12.37	10.73	.39	.007	.205	.557	......	.48	.791	.710	.051	.030	.95	53	12.60	2.18	174.5	52.2	70		d13.27
July 17	51.7	955	1.022	11.99	10.22	.46	.005	.209	.505	......	.59	.837	......	......	......	.96	39	10.44	2.59	66.0	16.1	76	10.47	21.92
July 18	......	960	1.019	10.26	8.95	.55	.020	.191	.479	......	.07	.806	.579	.056	.171	.85	25	9.00	1.59	140.3	42.9	69		
July 19	......	820	1.024	8.32	7.00	.35	.030	.182	.494	......	.26	.675	.501	.057	.117	.75	11	9.90	1.50	96.6	29.5	69		
Average	51.5	991	1.021	11.06	9.51	.44	.018	.191	.505	......	.39	.779	.621	.055	.094	.89	43	10.44	1.84	103.2	30.0	71	1.50	d3.32; 3.13

a Per cent. b Per cent July 13–17. c Per cent July 13–20. d July 13–20.

BALANCES.

		Grams.
Nitrogen in food		88.78
Nitrogen in excreta:		
Urine	77.39	
Feces	10.47	
		87.86
Nitrogen balance		+0.92

	Grams.
Ether extract in food	394.52
Ether extract in feces	13.27
Fat utilized	381.25

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces: Weight, Moist.	Feces: Weight, Air dry.	Feces: Water.	Feces: Total nitrogen.	Feces: Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 20.	51.5	730	1.021	9.50	8.25	0.39	0.026	0.183	0.487		0.16	0.832	0.632	0.036	0.164	0.73	33	7.92	2.02	95.8	27.5	71		
July 21.		1,110	1.018	11.77	10.02	.49		.199	.524			.843	.630	.051	.162	.81	22	10.62	2.13	103.6	35.2	66		
July 22.		1,140	1.019	10.42	9.23	.36	.020	.216	.550	0.024	.30 / .32	.796	.623	.056	.117	.87	16	13.32	1.70	137.0	18.1	87		
July 23.	52.1	1,240	1.016	9.72	8.38	.37	.007	.180	.498	.017	.25 / .27	.761	.619	.039	.102	.72	21	14.04	1.36	155.0	19.9	87	a6.29 / 10.38	a9.00 / 14.85
July 24.		800	1.022	9.50	8.16	.35		.200	.564			.724	.569	.042	.113	.81	28	9.18	2.02	82.2	20.7	75		
July 25	51.8	1,100	1.020	10.58	9.10	.35	.002	.187	.491		.45	.776	.606	.047	.123	.80	24	12.42	1.59	42.0	11.3	73		
July 26		1,260	1.017	9.50	8.00	.26	.006	.180	.505		.55	.796	.568	.023	.205	.77	15	13.50	1.22	116.3	32.3	72		
Average	51.8	1,054	1.019	10.14	8.73	.39	.013	.192	.517	.021	.28 / .35	.790	.607	.042	.141	.79	23	11.57	1.72	104.6	23.6	76	1.48	2.12

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		90.83
Nitrogen in excreta:		
Urine	70.99	
Feces	10.38	
		81.37
Nitrogen balance		+9.46

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Perct.	Gms.	Gms.
July 27	52.0	860	1.020	9.61	8.07	0.30	0.013	0.176	0.505	......	0.55	0.752	0.558	0.032	0.162	0.82	27	8.46	1.86	43.3	5.8	87		
July 28	......	940	1.020	9.18	7.61	.43	.009	.186	.535	......	.41	.705	.488	.046	.171	.80	15	9.18	1.43	......	......	......		
July 29	51.9	950	1.019	8.91	7.51	.32	.002	.180	.517	......	.38	.702	.545	.031	.126	.76	23	10.26	1.61	106.3	29.4	77		
July 30	......	1,280	1.018	9.45	8.20	.33	.008	.183	.520	......	.21	.769	.607	.041	.121	.76	41	17.28	1.54	42.8	12.0	72	a6.52	a10.19
July 31	......	940	1.019	8.96	7.51	.32	.002	.194	.509	......	.43	.759	.547	.049	.163	.77	32	11.88	1.70	96.0	26.5	72	7.86	12.28
August 1	52.2	1,120	1.024	8.86	7.58	.41	.002	.189	.502	......	.18	.675	.479	.049	.147	.84	27	13.86	1.77	32.0	9.5	70		
August 2	......	1,200	1.013	9.18	7.99	.32	.003	.176	.502	......	.19	.700	.538	.040	.122	.69	25	11.88	1.22	140.2	37.3	73		
Average	52.0	1,041	1.019	9.16	7.78	.35	.006	.183	.513	......	.33	.726	.537	.041	.145	.78	27	11.83	1.59	65.8	17.2	75	1.12	1.75

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		83.98
Nitrogen in excreta:		
Urine	64.15	
Feces	7.86	
		72.01
Nitrogen balance		+11.97

	Grams.
Ether extract in food	997.37
Ether extract in feces	12.28
Fat utilized	985.09

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 3	52.1	1,080	1.018	8.96	7.50	0.39	0.026	0.192	0.535	......	0.32	0.732	0.499	0.052	0.181	0.64	35	12.96	1.13	56.6	12.8	77		
August 4	......	760	1.017	8.32	7.05	.30	.017	.176	.546	......	.23	.706	.438	.038	.230	.46	33	6.30	.91	188.8	29.7	84		
August 5	51.5	640	1.020	9.56	7.86	.51	.044	.149	.543	......	.45	.703	.488	.051	.164	.44	Trace	4.32	1.63	155.8	11.0	92		
August 6	......	1,160	1.016	10.21	9.05	.35	......	.199	.524	......	......	.803	.634	.035	.134	.74	Trace	7.38	1.09	58.7	15.2	74	[a]6.17	[a]10.84
August 7	......	1,480	1.015	9.50	8.32	.27	......	.216	.487	......	......	.729	.603	.044	.082	.87	Trace	11.70	1.32	......	......	......	6.92	12.17
August 8	51.2	1,120	1.018	8.64	7.68	.26	.011	.180	.487	......	.02	.700	.541	.059	.100	.84	Trace	14.04	1.38	67.3	16.5	80		
August 9	......	1,350	1.016	9.72	8.47	.28	.008	.185	.479	......	.30	.776	.581	.047	.148	.76	8	14.04	1.09	84.8	27.0	68		
Average	51.6	1,084	1.017	9.27	7.99	.34	.021	.185	.514	......	.26	.736	.541	.047	.148	.68	25	10.11	1.22	87.4	16.0	79	.99	1.74

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		64.82
Nitrogen in excreta:		
Urine	64.91	
Feces	6.92	
		71.83
Nitrogen balance		−7.01

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 10	51.4	1,150	1.017	10.75	9.31	0.36	0.015	0.178	0.483	0.060	0.34 .40	0.754	0.589	0.050	0.115	0.78	27	12.96	1.70	26.8	6.3	76		
August 11	......	1,120	1.017	10.09	8.94	.24	.019	.167	.491	.055	.18 .23	.797	.578	.053	.166	.73	20	11.16	1.29	60.6	18.2	70		
August 12	51.0	1,100	1.018	9.99	8.72	.30	.020	.182	.520	......	.25	.776	.564	.048	.164	.75	31	12.06	1.68	67.5	14.8	78	[a] 6.74	[a] 14.17
August 13	......	1,200	1.020	9.29	7.79	.37	.013	.187	.576	......	.35	.732	.502	.066	.164	.73	28	12.96	2.00	108.0	23.3	78	7.05	14.82
August 14	......	1,240	1.020	9.94	8.66	.25	.006	.228	.509	......	.29	.732	.611	.049	.078	.75	22	16.38	1.36	42.0	13.4	68		
August 15	51.3	980	1.021	8.53	7.26	.30	.023	.173	.502	......	.27	.583	.485	.052	.046	.71	9	14.40	1.63	19.8	5.3	73		
August 16	......	1,380	1.018	9.18	7.82	.28	.023	.168	.505	......	.38	.682	.516	.040	.126	.70	Trace	15.12	1.32	78.3	23.3	70		
Average	51.2	1,167	1.019	9.68	8.36	.30	.017	.183	.512	.058	.26 .31	.722	.549	.051	.124	.74	23	13.58	1.57	57.6	14.9	73	1.01	2.12

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		84.37
Nitrogen in excreta:		
Urine	67.77	
Feces	7.05	
		74.82
Nitrogen balance		+9.5

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Perct.	Gms.	Gms.
August 17	51.4	1,260	1.016	9.61	8.21	0.22	0.032	0.188	0.535	......	0.42	0.717	0.517	0.052	0.148	0.72	20	14.40	1.00	23.2	6.8	70		
August 18	......	950	1,020	8.26	6.87	.26	.035	.165	.535	......	.40	.651	.453	.052	.146	.65	23	12.42	1.25	24.7	9.5	61		
August 19	51.9	1,000	1.016	7.34	6.17	.26	.033	.162	.502	......	.21	.653	.467	.086	.100	.62	28	10.80	1.50	16.4	5.7	65		
August 20	......	1,120	1.020	8.10	6.85	.23	.016	.180	.491	......	.33	.707	.511	.067	.129	.68	7	13.80	1.47	118.6	37.6	68	a6.26	a16.25
August 21	......	1,120	1.016	8.10	6.92	.21	.008	.179	.487	......	.30	.627	.513	.044	.070	.66	9	10.17	1.54	162.1	39.9	75	8.22	21.34
August 22	51.7	1,150	1.018	8.10	6.67	.24	.027	.168	.509	......	.49	.596	.412	.046	.138	.71	Trace	12.96	1.36	30.2	8.8	70		
August 23	......	1,280	1.015	8.05	6.85	.21	.044	.176	.498	......	.27	.574	.434	.028	.112	.74	Trace	14.30	1.11	79.7	23.0	71		
Average	51.7	1,126	1.017	8.22	6.93	.23	.028	.174	.508	......	.35	.646	.472	.054	.120	.68	17	12.69	1.32	65.0	18.8	69	1.17	3.05

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		75.52
Nitrogen in excreta:		
Urine	57.56	
Feces	8.22	
		65.78
Nitrogen balance		+9.74

	Grams.
Ether extract in food	909.08
Ether extract in feces	21.34
Fat utilized	887.74

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 24	51.6	1,120	1.016	7.99	6.61	0.30	0.014	0.170	0.498	0.007	0.39 / .40	0.613	0.483	0.045	0.085	0.66	16	11.52	1.45	41.3	10.2	75		
August 25	......	1,000	1.015	7.93	6.77	.25	.031	.167	.543	.031	.14 / .17	.718	.579	.040	.098	.47	20	10.26	1.22	43.2	11.0	75		
August 26	51.3	950	1.020	9.23	7.87	.33	.002	.171	.498	.080	.28 / .36	.661	.527	.048	.086	.67	23	9.99	1.70	127.9	31.3	76	a7.04 / 9.66	a10.41 / 14.28
August 27	......	1,080	1.020	8.21	7.07	.27	.017	.170	.502	.062	.12 / .18	.633	.497	.037	.099	.67	16	12.24	1.54	77.1	18.0	77		
August 28	......	1,160	1.017	7.93	6.88	.14	......	.178	.498	......	......	.650	.464	.069	.117	.67	22	12.24	.98	93.2	21.4	77		
August 29	51.9	1,060	1.022	6.80	5.43	.24	.006	.176	.505	......	.44	.504	.399	.068	.037	.63	17	15.84	1.11	128.7	17.3	87		
August 30	......	1,180	1.016	6.26	4.75	.48	.040	.140	.468	......	.38	.455	.364	.026	.065	.60	Trace	13.32	1.29	129.1	28.0	78		
Average	51.6	1,079	1.018	7.76	6.48	.29	.018	.167	.502	.045	.23 / .32	.605	.473	.048	.084	.62	19	12.20	1.33	91.5	19.6	78	1.38	2.04

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		80.77
Nitrogen in excreta:		
Urine	54.35	
Feces	9.66	
		64.01
Nitrogen balance		+16.76

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine.																	Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Perct.	Gms.	Gms.
August 31	52.3	720	1.023	6.70	5.38	0.29	0.035	0.131	0.565	0.068	0.23 / .30	0.559	0.471	0.038	0.050	0.55	16	9.99	1.45	40.7	9.4	77		
September 1	..	980	1.018	8.10	6.90	.28	.....	.156	.491	.068		.565	.457	.035	.073	.58	10	11.34	1.09	60.2	14.4	76		
September 2	52.6	1,060	1.019	7.99	...	.22	.017	.190	.520	.068		.711	.583	.040	.088	.58	18	14.40	1.00	63.8	13.8	78	a 7.31	a 10.12
September 3	.....	1,240	1.017	8.21	6.74	.33	.002	.169	.491	.068	.11 / .48	.685	.546	.046	.093	.63	19	14.94	1.32	108.7	23.8	78	9.33	12.91
September 4	.....	1,300	1.017	7.83	6.66	.25	.015	.171	.509	...	.23	.781	.623	.042	.116	.70	20	15.30	.98	47.7	11.3	76		
September 5	52.1	860	1.020	7.13	......	.32	.029	.142	.524	..	....	.613	.505	.047	.061	.62	26	12.24	1.25	114.1	33.5	71		
September 6	......	1,550	1.016	8.21	6.85	.28	.023	.209	.468	..	.38	.579	.487	.028	.064	.68	12	10.44	1.32	88.7	21.4	76		
Average	52.3	1,101	1.019	7.74	6.51	.28	.020	.167	.510	.068	.32 / .38	.642	.525	.039	.078	.62	17	12.66	1.20	74.8	18.2	76	1.33	1.84

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		79.29
Nitrogen in excreta:		
Urine	54.17	
Feces	9.33	
		63.50
Nitrogen balance		+15.79

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 7	52.3	930	1.020	7.07	5.90	0.31	0.019	0.165	0.502	0.038	0.14 / .18	0.561	0.486	0.039	0.036	0.65	14	12.24	1.22	38.5	10.0	74		
September 8	......	960	1.021	6.42	5.52	.21	.011	.164	.446	.038	.03 / .07	.497	.399	.038	.060	.62	31	15.03	0.82	94.2	22.7	76		
September 9	52.4	900	1.021	8.37	7.05	.35	.023	.179	.602	.038	.13 / .17	.754	.595	.041	.118	.79	22	10.98	1.86	45.3	12.0	74		
September 10	......	1,180	1.021	8.64	7.32	.29	.008	.181	.550	.038	.25 / .29	.656	.510	.052	.094	.77	19	16.20	1.22	90.8	22.4	75	[a]7.19 / 7.56	[a]11.48 / 12.07
September 11	......	800	1.018	7.24	6.09	.35	.018	.153	.520	.038	.08 / .12	.549	.462	.042	.043	.69	23	9.99	1.70	25.1	5.3	79		
September 12	52.7	1,080	1.019	8.10	6.80	.32	.010	.185	.509	.038	.24 / .28	.487	.412	.051	.025	.68	19	14.04	1.34	100.7	22.0	78		
September 13	......	1,320	1.018	9.29	7.90	.37	.022	.196	.491	.038	.27 / .31	......	.562	.031	......	.66	17	16.92	1.36	65.2	10.7	84		
Average	52.5	1,024	1.020	7.88	6.65	.31	.016	.175	.517	.038	.16 / .20	.584	.489	.042	.061	.69	21	13.63	1.36	65.7	15.0	77	1.08	1.72

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		83.41
Nitrogen in excreta:		
Urine	55.13	
Feces	7.56	
		62.69
Nitrogen balance		+20.72

	Grams.
Ether extract in food	1,115.67
Ether extract in feces	12.07
Fat utilized	1,103.60

FIRST BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Urine. Body weight.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 14	52.3	1,100	1.019	9.99	8.66	0.41	0.004	0.201	0.487	0.032	0.20 .23	0.676	0.567	0.050	0.060	0.76	29	12.60	1.54	150.8	36.0	76		
September 15	......	1,200	1.016	8.96	7.61	.38	......	.198	.505	.032	....	.538	.428	.061	.049	.74	32	12.96	1.52	56.1	14.6	74		
September 16	52.8	1,240	1.020	9.18	7.68	.31	.010	.203	.509	.032	.44 .47	.614	.472	.045	.097	.70	15	13.95	1.09	61.8	16.8	73		
September 17	....	930	1.023	9.45	7.95	.37	.008	.190	.569	.032	.33 .36	.684	.547	.045	.092	.68	19	12.78	1.36	131.6	30.4	77	[a]6.32 8.61	[a]10.39 14.14
September 18	....	1,100	1.021	9.94	8.47	.33	.013	.194	.502	.032	.40 .43	.746	.611	.042	.093	.69	20	13.32	1.11	79.3	23.0	71		
September 19	52.9	1,050	1.020	8.86	7.44	.28	.009	.164	.498	.032	.44 .47	.621	.514	.045	.062	.72	16	12.60	1.09	76.6	15.3	80		
September 20	......	1,240	1.017	8.32	7.08	.37	.007	.164	.502	.032	.16 .19	.571	.468	.024	.079	.69	12	14.22	1.32	......	......	......		
Average	52.7	1,123	1.019	9.24	7.84	.35	.009	.188	.510	.032	.33 .36	.636	.515	.045	.076	.61	20	13.20	1.29	79.5	19.4	75	1.23	2.02

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		83.07
Nitrogen in excreta:		
Urine	64.70	
Feces	8.61	
		73.31
Nitrogen balance		+9.76

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST AFTER PERIOD. SUBJECT W. W. H.

Date.	Urine.																		Feces.				
	Body weight	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 21	53.0	1,120	1.018	8.86	7.69	0.30	0.014	0.173	0.543	0.023	0.10 .12	0.670	0.571	0.037	0.062	0.70	17	12.78	1.00	87.0	12.0	86		
September 22	......	900	1.023	8.64	7.52	.26	.024	.181	.535	.023	.10 .12	.670	.544	.052	.074	.73	16	12.42	.86	17.8	5.0	71		
September 23	52.9	1,050	1.020	9.77	8.48	.43	.009	.160	.487	.023	.18 .20	.632	.513	.043	.076	.66	18	13.50	1.88	114.9	26.6	76		
September 24	......	1,060	1.020	7.99	6.81	.31	.023	.163	.524	.023	.13 .15	.579	.486	.035	.058	.72	13	13.59	1.13	......	......	......		
September 25	......	1,320	1.018	8.64	7.40	.38	.005	.182	.498	.023	.18 .20	.556	.482	.043	.031	.71	18	16.20	1.29	101.7	24.6	75	a6.72	a12.43
September 26	52.9	990	1.022	8.32	6.88	.30	.031	.191	.550	.023	.34 .36	.616	.509	.049	.058	.69	18	13.86	1.07	......	......	......	9.41	17.40
September 27	......	840	1.020	8.10	6.77	.41	.036	.144	.487	.023	.23 .25	.497	.403	.038	.058	.64	15	12.96	1.20	82.4	20.7	74		
September 28	53.2	880	1.021	8.32	6.98	.32	.028	.156	.520	.023	.29 .31	.561	.465	.047	.049	.69	21	11.16	1.32	55.8	15.0	73		
September 29	......	1,200	1.016	7.02	5.88	.23	.016	.157	.520	.023	.19 .21	.480	.380	.051	.049	.68	19	11.52	.88	104.7	26.2	74		
September 30	53.4	1,290	1.016	7.88	6.63	.28	.018	.159	.498	.023	.29 .31	.606	.481	.038	.087	.69	16	15.48	.84	29.7	9.9	66		
Average	53.1	1,065	1.019	8.35	7.10	.32	.020	.167	.516	.023	.19 .21	.587	.483	.043	.059	.69	17	13.35	1.15	59.4	14.0	74	.94	1.74

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		113.17
Nitrogen in excreta:		
Urine	83.54	
Feces	9.41	
		92.95
Nitrogen balance		+20.22

	Grams.
Ether extract in food	1,452.52
Ether extract in feces	17.40
Fat utilized	1,435.12

SECOND BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 1	......	1,270	1.015	7.93	6.56	0.36	0.013	0.162	0.531	0.050	0.25 / .30	0.502	0.409	0.040	0.052	0.77	26	12.42	1.16	85.2	22.7	73		
October 2	......	1,120	1.021	9.18	7.88	.32	.010	.203	.550	.050	.17 / .22	.667	.574	.054	.039	.76	74	12.60	1.18	18.1	6.0	66		
October 3	53.2	960	1.020	8.75	7.38	.45	......	191	.520	.050	....	.621	.506	.040	.075	.73	61	11.70	1.59	105.2	28.0	73		
October 4	......	1,590	1.016	8.75	7.41	37	.006	.221	.520	.050	.17 / .22	.606	.470	.031	.105	.76	21	19.08	1.22	89.1	22.4	74	a7.04 / 7.75	a11.09 / 12.21
October 5	53.5	1,100	1.020	8.47	7.16	.35	.020	.176	.524	.050	.19 / .24	.623	.532	.040	.051	.69	14	12.60	1.32	18.7	5.7	69		
October 6	......	860	1.020	8.96	7.50	.39	.013	.176	.524	.050	.31 / .36	.613	.526	.043	.044	.74	14	9.90	1.70	57.6	14.8	74		
October 7	54.0	1,220	1.021	8.53	7.35	.31	.003	.193	.543	.050	.08 / .13	.574	.471	.067	.036	.66	19	18.18	1.04	85.1	10.5	87		
Average	53.6	1,160	1.019	8.65	7.32	.36	011	189	.530	.050	.20 / .25	.601	.498	.045	.057	.73	33	13.78	1.32	65.6	15.7	74	1.11	1.74

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		83.22
Nitrogen in excreta:		
Urine	60.57	
Feces	7.75	
		68.32
Nitrogen balance		+14.90

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 8	......	1,120	1.017	8.10	6.86	0.32	0.020	0.149	0.491	0.067	0.19 .26	0.554	0.466	0.046	0.042	0.61	12	13.50	1.29	65.7	14.5	77		
October 9	......	1,560	1.017	8.04	6.67	.29	.005	.225	.517	.067	.27 .34	.611	.523	.039	.049	.63	12	18.90	1.11	46.3	11.7	74		
October 10	53.7	1,100	1.020	7.99	6.85	.28	......	.202	.580	.067	......	.628	.524	.038	.065	.76	12	15.30	1.45	130.5	30.0	77		
October 11	......	1,450	1.018	7.99	6.52	.28	.014	.209	.576	.067	.32 .39	.561	.479	.036	.046	.73	Trace.	19.80	1.18	......	......	......	[a]6.79 8.68	[a]10.85 13.88
October 12	53.5	920	1.023	8.64	7.43	.40	.008	.167	.531	.067	.04 .11	.619	.523	.048	.048	.77	18	11.34	2.11	107.0	32.2	69		
October 13	......	1,360	1.018	9.01	7.51	.38	.009	.169	.520	.067	.35 .42	.624	.517	.055	.052	.80	37	16.56	1.61	59.9	19.3	67		
October 14	54.0	1,440	1.018	8.96	7.43	.35	.020	.182	.543	.067	.37 .44	.586	.491	.038	.057	.80	13	16.74	1.27	66.2	20.2	69		
Average	53.7	1,279	1.019	8.39	7.04	.33	.013	.186	.537	.067	.26 .33	.598	.503	.043	.051	.73	17	16.02	1.43	67.9	18.3	72	1.24	1.98

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		84.43
Nitrogen in excreta:		
Urine	58.73	
Feces	8.68	
		67.41
Nitrogen balance		+17.02

	Grams.
Ether extract in food	1,070.62
Ether extract in feces	13.88
Fat utilized	1,056.74

SECOND BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Urine. Body weight.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 15	.....	1,370	1.020	8.80	7.20	0.36	0.005	0.209	0.520	0.156	0.35 / .51	0.692	0.571	0.038	0.081	0.71	14	19.80	1.04	87.0	17.9	79		
October 16	.....	1,570	1.017	9.29	7.78	.32	.003	.170	.517	.156	.34 / .50	.665	.560	.052	.053	.76	Trace.	18.90	1.43	15.8	4.1	74		
October 17	54.3	1,290	1.019	8.64	7.29	.32	.....	.207	.509	.156	.....	.687	.585	.049	.053	.72	16	16.92	1.22	77.9	18.0	76	a 6.79	a 10.05
October 18	.....	1,310	1.020	8.86	7.07	.32	.014	.200	.520	.156	.58 / .74	.613	.516	.022	.075	.76	Trace.	17.64	1.20	110.0	27.1	75	7.59	11.24
October 19	54.2	1,200	1.018	8.96	7.66	.28	.012	.177	.520	.156	.16 / .32	.597	.490	.042	.065	.70	15	12.69	1.18	78.9	25.0	68		
October 20	.....	1,600	1.015	9.23	7.91	.30	.....	.166	.543	.156	.....	.601	.486	.043	.072	.71	13	12.78	1.50	41.1	11.7	71		
October 21	53.9	1,420	1.020	9.45	7.94	.27	.....	.221	.550	.156	.....	.720	.588	.028	.104	.78	8	17.46	1.27	34.3	8.0	76		
Average	54.1	1,394	1.018	9.03	7.55	.31	.009	.193	.526	.156	.36 / .52	.654	.542	.039	.072	.73	13	16.60	1.26	63.6	16.0	74	1.08	1.61

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		85.84
Nitrogen in excreta:		
Urine	63.23	
Feces	7.59	
		70.82
Nitrogen balance		+15.02

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 22	......	1,200	1.023	9.29	7.56	0.38	......	0.167	0.520	0.230	......	0.674	0.536	0.048	0.090	0.75	10	13.59	1.66	32.4	7.0	78		
October 23	......	1,380	1.013	9.72	8.13	.45	0.009	.148	.524	.230	0.23 .46	.734	.588	.056	.090	.74	9	11.70	1.79	104.6	28.8	72		
October 24	54.2	1,080	1.021	8.96	7.17	.28	.010	.180	.550	.230	.54 .77	.556	.491	.047	.018	.72	13	11.34	1.13	46.4	7.2	84		
October 25	......	1,260	1.017	7.99	5.84	.37	.020	.176	.491	.230	.86 1.09	.509	.446	.024	.039	.69	9	13.68	1.09	86.1	18.0	79	*a*6.30 7.70	*a* 13.10 16.01
October 26	54.2	1,040	1.021	9.07	7.18	.43	.012	.174	.517	.230	.53 .76	.660	.517	.056	.087	.68	25	12.24	1.54	92.3	25.2	72		
October 27	......	1,660	1.010	9.01	7.46	.27	.012	.201	.505	.230	.33 .56	.681	.524	.051	.106	.80	11	20.52	1.22	67.9	19.5	71		
October 28	54.2	1,080	1.017	8.32	6.60	.42	.002	.155	.487	.230	.43 .66	.603	.479	.046	.078	.68	18	11.79	1.54	63.8	16.5	74		
Average	54.2	1,243	1.017	8.91	7.13	.37	.011	.172	.513	.230	.49 .72	.631	.512	.047	.073	.72	14	13.55	1.42	70.5	17.5	76	1.10	2.29

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		81.12
Nitrogen in excreta:		
Urine	62.36	
Feces	7.70	
		70.06
Nitrogen balance		+11.06

	Grams.
Ether extract in food	1,121.79
Ether extract in feces	16.01
Fat utilized	1,105.78

FINAL AFTER PERIOD. SUBJECT W. W. H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 29		1,400	1.016	7.99	6.70	0.32	0.008	0.160	0.502	0.190	0.11 / .30	0.605	0.471	0.054	0.080	0.69	16	14.31	1.54	55.[illegible]	8.0	85		
October 30		1,120	1.019	8.58	7.17	.28		.186	.498	.190		.630	.498	.054	.078	.72	10	12.78	1.41	66.6	17.8	73		
October 31	51.4	1,200	1.020	9.18	7.56	.32		.211	.587	.190		.655	.531	.046	.078	.83	14	15.81	1.61	100.7	17.6	82		
November 1		1,380	1.016	8.21	7.01	.39	.004	.176	.491	.190	0 / .19	.551	.457	.037	.057	.73	Trace	14.04	1.70	...	....	...		b9.62
November 2	54.5	1,180	1.020	8.21	7.15	.27		.173	.543	.190		.635	.546	.047	.042	.66	17	11.34	1.52	177.7	43.3	75	a6.68	c10.61
November 3		1,000	1.020	8.69	7.24	.27	.004	.201	.550	.190	.21 / .43	.692	.526	.070	.096	.74	16	11.16	1.45	11.9	3.8	68		d16.03
November 4	54.5	1,230	1.021	9.88	8.38	.42		.212	.520	.190		.717	.583	.045	.089	.76	15	16.20	1.88	33.7	9.8	70	10.62	e8.34
November 5		800	1.022	8.47	6.93	.41	.010	.165	.531	.190	.23 / .42	.581	.485	.052	.044	.73	45	14.22	2.40	...	.....			f7.69
November 6		1,160	1.020	10.01	8.40	.29		.196	.550	.190		.645	.567	.043	.035	.74	31	12.33	1.63	107.1	28.2	73		
November 7	54.5	1,000	1.022	9.55	7.78	.32	.005	.213	.546	.190	.50 / .69	.643	.516	.051	.076	.72	11	12.60	2.04	131.8	30.5	76		
Average	54.5	1,117	1.020	8.88	7.43	.33	.006	.189	.532	.190	.22 / .41	.635	.518	.050	.068	.73	20	13.48	1.72	68.5	15.9	75	1.06	e1.6[illegible] / f1.74 / d1.60

a Per cent.
b Per cent Oct. 29–Nov. 3.
c Per cent Nov. 3–8.
d Oct. 29–Nov. 8.
e Oct. 29–Nov. 3.
f Nov. 3–8.

BALANCES.

		Grams.
Nitrogen in food		114.15
Nitrogen in excreta:		
Urine	88.80	
Feces	10.62	
		99.42
Nitrogen balance		+14.73

	Grams.
Ether extract in food	615.55
Ether extract in feces	7.69
Fat utilized	607.86

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FORE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. NH_3 nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Total acidity as oxalic acid.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.	Feces. Total nitrogen.	Feces. Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 6	......	840	1.020	12.15	10.08	0.51	0.078	0.154	0.513	......	0.81	0.876	0.720	0.023	0.133	0.95	15	8.01	2.54	82.0	36.5	55		
July 7	69.0	865	1.023	12.20	10.07	46	050	.188	.658	0.019	.75 .77	....	.774	.038	....	.95	10	9.18	2.20	145.0	37.0	74		
July 8	......	1,105	1.022	11.64	10.07	.43	.035	.196	.632	.009	.28 .29	.849	.713	.050	.086	98	9	13.20	2.52	136.5	43.5	68		
July 9	......	1,125	1.024	12.21	10.16	.53	.051	.205	.636	.078	.56 .64	.890	.784	.043	.063	1.15	9	15.18	2.19	145.0	41.0	72	a5.15 14.91	a 15.49 45.17
July 10	......	790	1.025	11.58	9.44	.58	.045	.191	.654	.098	.61 .71	.840	.715	.055	.070	1.03	8	8.50	2.42	162.5	57.1	65		
July 11	69.0	1,140	1.020	12.89	10.85	.50	.064	.171	.613	......	.69	.973	.786	.097	.090	1.15	13	12.54	2.44	174.0	45.0	74		
July 12	......	1,290	1.019	12.12	10.06	.62	.061	.285	.654	......	.44	.758	.695	.055	.008	1.18	18	13.80	2.72	130.1	31.4	76		
Average	69.0	1,022	1.022	12.11	10.10	.52	.055	.199	.626	.051	.55 .62	.864	.741	.052	.075	1.06	12	11.49	2.43	139.3	41.6	69	2.13	6.45

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		109.33
Nitrogen in excreta:		
Urine	84.79	
Feces	14.91	
		99.70
Nitrogen balance		+9.63

FORE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100)	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.		Gms.	Gms.	Gms.	Gms.	Per ct	Gms.	Gms.
July 13	......	1,000	1.023	12.96	11.19	0.58	0.059	0.223	0.643	......	0.26	0.890	0.755	0.048	0.087	1.10	18	11.20	2.55	76.7	19.5	75		
July 14	68.3	960	1.023	12.26	10.23	.52	.049	.214	.613	......	.64	.782	.616	.056	.110	1.10	44	9.18	1.72	120.0	24.4	80		
July 15	......	1,430	1.017	12.00	10.33	.28	.036	.200	.639	......	.52	.898	.704	.049	.145	1.09	38	12.80	1.49	114.0	32.5	71	a5.38	b15.24
July 16	......	880	1.023	11.61	10.01	.41	.037	.195	.650	......	.31	.748	.573	.059	.116	1.02	40	8.64	2.29	105.9	48.8	54		c14.15
July 17	69.1	820	1.025	10.21	8.65	.37	.021	.213	.602	......	.35	.777	.616	.048	.113	.99	14	8.82	2.06	117.7	25.8	78	13.16	d19.08
July 18	......	855	1.023	9.72	8.00	.43	.067	.171	.621	......	.43	.670	.501	.061	.108	.97	9	9.18	2.49	184.0	46.0	75		34.61
July 19	......	815	1.023	10.15	8.30	.55	.043	.178	.602	......	.48	.831	......	......	......	.82	12	8.28	2.18	186.0	47.6	74		
Average	68.7	966	1.022	11.27	9.53	.45	.045	.199	.624	......	.42	.799	.627	.054	.113	1.01	25	9.73	2.11	129.2	34.9	72	1.74	d4.77 4.94

a Per cent. b Per cent July 13-17. c Per cent July 13-20. d July 13-17

BALANCES.

	Grams.	Grams.
Nitrogen in food		104.61
Nitrogen in excreta:		
Urine	78.91	
Feces	13.16	
		92.07
Nitrogen balance		+12.54

	Grams.
Ether extract in food	484.50
Ether extract in feces	19.08
Fat utilized	465.42

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 20	69.2	940	1.022	12.04	10.16	0.48	0.036	0.198	0.617	......	0.55	0.918	0.714	0.035	0.169	0.96	20	9.36	2.45	78.5	15.4	80		
July 21	......	1,040	1.021	11.56	9.69	.49	.024	.190	.621	......	.54	.890	.679	.043	.168	.91	33	10.98	2.00	82.6	18.6	77		
July 22	....	1,130	1.020	12.10	10.56	.43	.073	.199	.634	0.025	{.15 .18}	.896	.702	.052	.144	1.10	10	12.24	2.84	160.0	30.3	81		
July 23	69.2	1,000	1.020	11.02	9.40	.43	.037	.174	.602	.019	{.34 .36}	.790	.651	.043	.096	.92	13	11.16	2.27	122.2	28.6	77	{a6.38 13.13}	a15.12 31.12
July 24	......	920	1.023	11.61	9.90	.44	.023	.222	.621	......	.40	.915	.713	.041	.161	1.08	15	9.90	2.70	166.3	30.5	82		
July 25	69.8	1,180	1.015	11.99	10.07	.52	.018	.213	.569	.....	.52	.897	.703	.054	.140	.99	14	11.52	2.54	160.3	32.9	79		
July 26	......	1,240	1.020	11.88	9.78	.67	.023	.263	.595	......	.55	.952	.723	.043	.186	1.06	14	12.24	2.99	190.7	49.5	74		
Average	69.4	1,064	1.020	11.74	9.94	.49	.033	.208	.608	.022	{.25 .44}	.894	.698	.044	.152	1.00	17	11.06	2.58	137.2	29.4	79	1.88	4.45

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		103.31
Nitrogen in excreta:		
Urine	82.20	
Feces	13.13	
		95.33
Nitrogen balance		+ 7.98

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
July 27	69.7	1,110	1.022	12.10	10.34	0.54	0.015	0.266	0.602	......	0.34	0.868	0.677	0.034	0.157	1.15	9	12.24	2.15	107.2	17.2	84		
July 28	......	670	1.023	9.13	7.54	.51	.023	.213	.602	......	.24	.654	.492	.041	.121	1.02	6	8.28	1.47	124.5	26.0	79		
July 29	69.5	840	1.023	9.72	8.08	.45	.045	.209	.610	......	.33	.718	.551	.038	.129	.84	7	9.72	1.61	150.6	26.1	83	[a]6.70	[a]14.61
July 30	......	640	1.021	9.45	7.75	.45	.029	.194	.610	......	.42	.746	.585	.027	.134	.80	13	7.92	2.15	145.5	26.6	82	10.86	23.68
July 31	......	740	1.024	8.59	7.08	.37	.024	.190	.602	......	.32	.730	.556	.041	.133	.77	9	9.54	1.70	53.2	15.2	71		
August 1	69.3	850	1.023	9.18	7.82	.39	.036	.213	.595	......	.13	.722	.505	.057	.160	.83	9	11.52	1.68	101.5	23.1	77		
August 2	......	1,080	1.017	10.01	8.20	.50	.040	.189	.632	......	.48	.823	.631	.039	.153	.76	13	9.18	1.50	97.5	27.9	71		
Average	69.5	846	1.022	9.74	8.12	.46	.030	.211	.608	......	.31	.752	.571	.040	.141	.88	9	9.77	1.75	111.4	23.2	78	1.55	3.38

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		87.19
Nitrogen in excreta:		
Urine	68.21	
Feces	10.86	
		79.07
Nitrogen balance		+8.12

	Grams.
Ether extract in food	972.99
Ether extract in feces	23.68
Fat utilized	949.31

Daily records of urine and feces of the individual subjects, showing chemical composition; nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 3	69.2	930	1.021	9.83	7.95	0.48	0.042	0.210	0.569	......	0.58	0.687	0.484	0.040	0.168	0.75	7	10.98	2.00	127.2	23.0	82		
August 4	......	1,340	1.017	9.23	7.64	.36	.033	.208	.602	......	.39	.701	.486	.044	.171	.76	7	17.10	1.25	97.0	21.2	78		
August 5	70.0	1,000	1.021	9.61	7.70	.45	.024	.212	.632	......	.60	.774	.547	.044	.183	.71	10	12.60	1.68	88.9	19.6	78		
August 6	......	880	1.020	10.10	8.31	.39	......	.204	.632	......	......	.781	.559	.044	.178	.70	9	10.62	1.63	52.6	17.6	67	a6.45	a13.68
August 7	......	820	1.024	8.64	6.91	.32	.025	.202	.610	......	.57	.653	.486	.059	.108	.66	20	11.34	1.27	164.9	35.2	79	10.87	23.06
August 8	69.2	820	1.022	9.61	8.14	.39	.032	.191	.595	......	.26	.749	.515	.062	.172	.81	17	10.44	1.86	71.3	19.2	73		
August 9	......	1,300	1.015	9.72	8.08	.45	.049	.191	.636	......	.31	.816	.633	.038	.145	.72	11	10.44	1.66	98.9	32.8	67		
Average	69.4	1,013	1.020	9.53	7.82	.41	.034	.203	.611	......	.45	.737	.530	.047	.161	.73	12	11.93	1.62	100.1	24.1	75	1.55	3.29

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		88.97
Nitrogen in excreta:		
Urine	66.74	
Feces	10.87	
		77.61
Nitrogen balance		+11.36

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. NH_3 nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Total acidity as oxalic acid.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.	Feces. Total nitrogen.	Feces. Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 10	69.2	760	1.023	9.88	8.23	0.41	0.022	0.209	0.569	0.069	0.37 / .44	0.749	0.566	0.048	0.135	0.79	15	9.36	1.95	29.4	7.6	74		
August 11	......	990	1.021	9.83	8.56	.29	.032	.186	.569	.085	.11 / .20	.729	.507	.049	.173	.67	9	11.52	1.50	46.8	14.0	70		
August 12	69.1	760	1.023	9.61	8.01	.41	.046	.179	.610	......	.35	.729	.551	.039	.139	.72	7	8.46	2.40	136.3	28.6	79	a6.50	a16.31
August 13	......	860	1.023	9.88	8.08	.35	.020	.216	.669	......	.54	.712	.510	.050	.152	.74	9	10.80	2.13	83.3	20.2	76	9.64	24.19
August 14	......	1,020	1.020	8.96	7.70	.29	.072	.169	.595	......	.13	.617	.487	.037	.093	.68	Trace	13.68	1.38	125.8	24.1	81		
August 15	69.6	1,065	1.022	8.06	6.87	.38	.077	.170	.602	......	....	.715	.483	.057	.175	.82	9	15.96	1.22	111.3	25.6	79		
August 16	......	1,090	1.017	8.32	6.57	.45	.033	.162	.595	......	.51	.625	.457	.018	.150	.63	Trace	10.44	1.63	135.2	28.2	79		
Average	69.3	935	1.021	9.22	7.72	.37	.043	.184	.601	.077	.24 / .31	.697	.509	.043	.145	.72	10	11.46	1.74	95.4	21.2	77	1.38	3.46

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		82.69
Nitrogen in excreta:		
Urine	64.54	
Feces	9.64	
		74.18
Nitrogen balance		+8.51

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 17	70.4	1,120	1.017	8.21	6.64	0.32	0.037	0.231	0.617	......	0.36	0.616	0.413	0.036	0.167	0.72	11	16.20	1.29	165.2	30.0	81		
August 18	......	1,060	1.020	7.72	6.11	.26	.015	.187	.610	......	.54	.588	.395	.037	.156	.67	Trace	14.40	1.25	110.8	15.4	86		
August 19	69.2	700	1.022	7.34	6.17	.25	.031	.167	.602	......	.15	.660	.456	.046	.158	.69	13	8.73	1.59	105.9	21.0	80		
August 20	......	950	1.020	8.10	6.85	.28	.008	.168	.576	......	.22	......	.436	.046	......	.68	Trace	9.72	1.41	90.5	16.0	82	a6.80	a12.91
August 21	......	1,220	1.017	7.93	6.37	.27	.026	.192	.567	......	.51	.588	.455	.037	.096	.73	Trace	10.26	1.68	155.5	31.2	79	11.57	21.96
August 22	69.9	1,200	1.017	8.86	7.41	.26	.038	.185	.595	......	.37	.579	.446	.054	.079	.73	Trace	10.98	1.45	147.6	28.8	80		
August 23	......	1,340	1.016	9.11	7.42	.37	.065	.184	.602	......	.41	.622	.463	.025	.134	.77	Trace	11.44	1.77	118.1	27.7	76		
Average	69.8	1,084	1.018	8.18	6.71	.29	.031	.188	.596	......	.37	.609	.438	.040	.130	.71	......	11.68	1.49	127.6	24.3	81	1.65	3.14

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		79.81
Nitrogen in excreta:		
Urine	57.27	
Feces	11.57	
		68.84
Nitrogen balance		+10.97

	Grams.
Ether extract in food	919.98
Ether extract in feces	21.96
Fat utilized	898.02

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 24	69.6	1,070	1.018	9.66	8.05	0.32	0.002	0.218	0.595	0.093	0.38 / .47	0.693	0.544	0.033	0.116	0.76	8	9.72	1.81	86.7	11.2	87		
August 25		1,010	1.021	9.72	8.08	.35	.046	.199	.617	.049	.38 / .43	.775	.585	.037	.153	.74	Trace	11.16	1.66	45.0	9.2	80		
August 26	69.6	1,260	1.014	9.72	8.31	.28	.019	.177	.569	.019	.35 / .37	.623	.473	.047	.101	.77	Trace	8.28	1.81	61.1	15.9	74	a6.68 / 11.24	a14.80 / 24.83
August 27		1,280	1.018	9.18	7.64	.25	.033	.198	.602	.067	.39 / .46	.679	.503	.043	.133	.80	Trace	12.06	1.54	134.7	34.6	74		
August 28		940	1.020	8.53	7.21	.24	.016	.180	.610	.....	.27	.637	.482	.069	.086	.76	Trace	7.74	1.38	115.1	24.4	79		
August 29	69.8	1,300	1.022	8.32	6.64	.32	.041	.245	.595	.....	.48	.606	.456	.054	.096	.84	Trace	16.38	1.56	152.3	29.9	80		
August 30		1,300	1.015	8.10	6.27	.48	.058	.182	.587	.....	.52	.504	.386	.054	.064	.68	Trace	11.70	1.63	170.6	42.6	75		
Average	69.7	1,166	1.018	9.03	7.46	.32	.031	.200	.596	.057	.38 / .43	.645	0.490	.048	.107	.76	Trace	11.01	1.63	109.4	24.0	78	1.60	3.55

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		86.35
Nitrogen in excreta:		
Urine	63.23	
Feces	11.21	
		74.44
Nitrogen balance		+11.91

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine.																	Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 31	69.6	1,040	1.020	7.99	6.37	0.38	0.024	0.210	0.658	0.052	0.30 / .35	0.536	0.432	0.033	0.071	0.75	Trace	13.32	1.63	87.5	17.8	79		
September 1	......	840	1.022	8.04	6.66	.30	......	.167	.550	.052	......	.566	.421	.039	.106	.70	Trace	10.35	1.04	76.1	15.7	79		
September 2	69.1	940	1.018	8.86	7.37	.36	.023	.182	.587	.052	.29 / .34	.638	.525	.026	.087	.67	Trace	9.00	1.27	158.1	24.4	84	[a]6.69 / 10.41	[a]13.85 / 21.55
September 3	......	1,070	1.021	8.80	7.24	.38	.019	.185	.595	.052	.33 / .38	.561	.461	.042	.058	.65	Trace	13.68	1.27	112.2	25.2	77		
September 4	......	1,280	1.017	9.01	7.58	.36	.027	.193	.587	......	.25	.677	.538	.031	.108	.77	Trace	14.22	1.43	76.8	19.4	74		
September 5	70.1	1,200	1.017	8.42	7.13	.32	.041	.170	.602	......	.16	.551	.436	.046	.071	.73	Trace	12.60	1.41	105.4	22.8	78		
September 6	......	1,160	1.018	8.96	7.38	.35	.051	.178	.580	......	.42	.601	.441	.037	.123	.71	Trace	11.70	1.52	128.2	30.3	76		
Average	69.6	1,076	1.019	8.58	7.10	.35	.031	.184	.594	.052	.31 / .32	.590	.465	.036	.089	.71	Trace	12.12	1.37	106.3	22.2	78	1.49	3.08

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		85.36
Nitrogen in excreta:		
Urine	60.08	
Feces	10.41	
		70.49
Nitrogen balance		+14.87

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 7	70.4	1,100	1.021	8.37	6.93	0.30	0.026	0.201	0.617	0.036	0.26 .30	0.586	0.479	0.040	0.068	0.76	Trace	14.58	1.34	58.6	13.4	77		
September 8	.....	980	1.023	9.34	7.88	.27	.035	.205	.610	.036	.30 .31	.613	.488	.043	.082	.77	Trace	12.96	1.18	117.6	28.7	76		
September 9	69.9	980	1.021	9.18	7.77	.33	.022	.191	.587	.036	.24 .28	.682	.541	.031	.110	.74	Trace	11.97	1.59	86.4	20.8	76		
September 10	.....	1,150	1.017	9.45	8.20	.28	.031	.178	.636	.036	.09 .13	.593	.465	.051	.077	.81	Trace	10.26	1.66	86.1	21.1	75	[a]96.81 10.48	[a]14.58 22.44
September 11	.....	1,010	1.020	8.80	7.38	.45	.050	.249	.617	.036	.02 .06	.635	.541	.042	.052	.83	Trace	11.34	1.97	69.4	15.4	78		
September 12	70.4	920	1.020	9.83	8.18	.41	.034	.234	.595	.036	.34 .38	.613	.522	.044	.047	.83	Trace	9.90	1.97	111.4	20.7	81		
September 13	.....	1,560	1.017	10.26	8.72	.41	.035	.232	.587	.036	.21 .28	.579	.466	.038	.075	.80	Trace	16.92	1.38	147.5	33.8	77		
Average	70.2	1,100	1.020	9.32	7.87	.35	.033	.213	.607	.036	.21 .26	.611	.500	.041	.073	.79	Trace	12.56	1.58	96.7	22.0	77	1.50	3.21

[a] Per cent.

BALANCES.

	Grams.	Grams.
Nitrogen in food		91.82
Nitrogen in excreta:		
Urine	65.23	
Feces	10.48	
		75.71
Nitrogen balance		+16.11

	Grams.
Ether extract in food	1,094.86
Ether extract in feces	22.44
Fat utilized	1,072.42

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine.																	Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogn.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
September 14	70.2	1,220	1.020	9.61	7.82	0.39	0.032	0.213	0.602	0.104	0.45 / .55	0.661	0.546	0.045	0.070	0.81	Trace	15.57	1.70	82.5	16.1	80		
September 15	......	940	1.022	10.04	8.41	.50	.034	.189	.602	.104	.20 / .30	.672	.552	.046	.074	.82	Trace	12.24	2.15	116.7	27.4	77		
September 16	70.4	1,160	1.021	9.72	8.20	.33	.027	.218	.602	.104	.24 / .34	.597	.479	.048	.070	.83	Trace	14.22	1.61	81.1	15.4	81		
September 17	......	1,010	1.020	10.20	8.69	.38	.034	.191	.643	.104	.16 / .26	.666	.526	.049	.091	.76	Trace	11.16	1.66	150.6	28.2	81	a6.23 / 9.82	a13.77 / 21.70
September 18	......	1,310	1.020	10.63	9.08	.26	.032	.211	.610	.104	.34 / .44	.749	.602	.045	.102	.80	Trace	14.76	1.25	93.4	20.2	78		
September 19	70.0	1,020	1.023	9.83	8.32	.32	.018	.187	.576	.104	.30 / .40	.606	.496	.049	.062	.78	Trace	11.70	1.45	94.0	22.7	76		
September 20	......	1,200	1.020	9.18	7.48	.35	.070	.162	.602	.104	.42 / .52	.591	.480	.038	.073	.75	Trace	16.02	1.36	112.1	27.6	75		
Average	70.2	1,123	1.021	9.89	8.29	.36	.035	.196	.605	.104	.30 / .40	.649	.526	.046	.077	.79	Trace	13.67	1.60	104.3	22.5	78	1.40	3.10

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		91.97
Nitrogen in excreta:		
Urine	69.21	
Feces	9.82	
		79.03
Nitrogen balance		+12.94

FIRST AFTER PERIOD. SUBJECT L. M. L.

Date.	Body weight	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	G m.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
September 21......	70.7	1,280	1.017	9.18	7.91	0.30	0.042	0.176	0.610	0.027	0.12 / .15	0.667	0.570	0.045	0.052	0.77	Trace	14.58	1.36	56.3	13.8	75		
September 22......	......	1,220	1.022	9.40	8.18	.25	.039	.204	.632	.027	.07 / .10	.630	.580	.045	.055	.86	Trace	14.67	1.27	150.7	30.2	79		
September 23......	71.4	850	1.022	8.91	7.55	.39	.031	.180	.587	.027	.15 / .18	.697	.568	.048	.081	.78	Trace	10.98	1.75	69.4	17.7	74		
September 24......	......	1,060	1.021	9.72	8.19	.40	.035	.196	.617	.027	.25 / .28	.670	.546	.043	.081	.99	Trace	13.14	2.06	172.8	47.3	72		
September 25......	......	1,200	1.020	9.94	8.38	.37	.020	.203	.610	.027	.33 / .36	.608	.498	.045	.065	.85	Trace	15.39	1.77	109.1	19.0	82	a6.53	a14.53
September 26......	70.7	1,390	1.020	10.48	8.69	.43	.044	.215	.650	.027	.42 / .45	.690	.537	.055	.098	.86	Trace	16.02	1.36	58.8	15.3	73	13.39	29.80
September 27	......	1,040	1.019	9.07	7.60	.39	.059	.146	.595	.027	.25 / .28	.581	.474	.041	.066	.76	Trace	10.98	1.66	84.5	28.7	71		
September 28......	70.4	920	1.020	9.29	7.77	.28	.039	.170	.587	.027	.42 / .45	.640	.496	.048	.096	.75	8	11.34	1.54	57.4	11.3	80		
September 29......	......	910	1.021	8.86	7.42	.30	.045	.153	.610	.027	.31 / .34	.623	.499	.055	.069	.72	Trace	10.44	1.36	78.4	22.1	71		
September 30......	70.4	960	1.022	9.40	8.12	.30	.020	.180	.595	.027	.14 / .17	.697	.561	.028	.108	.80	Trace	11.70	1.61	23.9	4.4	81		
Average....	70.7	1,083	1.020	9.43	7.98	.34	.037	.182	.609	.027	.25 / .28	.650	.528	.045	.076	.81	Trace	12.92	1.57	86.1	20.5	76	1.34	2.98

a Per cent.

BALANCES.

		Grams.
Nitrogen in food..		123.97
Nitrogen in excreta:		
Urine..	94.25	
Feces.	13.39	
		107.64
Nitrogen balance.....		+16.33

	Grams.
Ether extract in food .	1,383.48
Ether extract in feces.....	29.80
Fat utilized ...	1,353.68

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. NH_3 nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Total acidity as oxalic acid.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.	Feces. Total nitrogen.	Feces. Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 1	......	1,380	1.017	9.40	7.71	0.33	0.037	0.194	0.595	0.071	0.46 .53	0.588	0.437	0.054	0.097	0.82	Trace	12.06	1.63	53.7	15.4	71		
October 2	......	1,320	1.019	9.94	8.39	.41	.048	.213	.602	.071	.21 .28	.700	.583	.062	.055	.90	16	13.68	1.56	78.4	20.4	73		
October 3	70.6	980	1.023	10.15	8.38	.48	.043	.202	.617	.071	.36 .43	.680	.560	.050	.070	.74	17	12.42	1.81	84.9	25.7	69		
October 4	......	1,140	1.021	9.94	8.52	.39	.040	.198	.617	.071	.10 .17	.623	.547	.039	.037	.72	Trace	14.22	1.66	102.3	25.9	74	[a]6.86 10.73	[a]13.79 21.58
October 5	70.7	1,030	1.021	9.83	8.25	.33	.043	.188	.602	.071	.35 .42	.724	.616	.045	.063	.84	Trace	10.80	1.84	137.2	29.4	78		
October 6	......	1,060	1.021	9.94	8.19	.35	.045	.213	.632	.071	.44 .51	.630	.544	.042	.044	.82	Trace	12.42	1.32	94.0	22.0	76		
October 7	71.0	840	1.023	9.07	7.46	.48	.054	.218	.621	.071	.17 .24	.635	.521	.076	.038	.72	Trace	9.36	1.61	71.3	17.6	75		
Average	70.8	1,107	1.021	9.75	8.13	.40	.044	.204	.612	.071	.30 .37	.654	.544	.053	.058	.79	17	12.14	1.63	88.8	22.3	74	1.53	3.08

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		91.04
Nitrogen in excreta:		
Urine	68.27	
Feces	10.73	
		79.00
Nitrogen balance		+12.04

SECOND BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine.																		Feces.					
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c.c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 8		1,180	1.017	8.80	7.26	0.49	0.055	0.221	0.602	0.099	0.07 / .17	0.591	0.492	0.050	0.049	0.64	Trace	15.12	1.41	118.5	22.2	81		
October 9		1,330	1.021	8.64	7.05	.35	.038	.173	.610	.099	.32 / .42	.640	.537	.050	.053	.74	Trace	18.00	1.22	105.5	24.4	76		
October 10	71.7	1,360	1.018	9.29	7.62	.37	.023	.213	.650	.099	.31 / .41	.638	.518	.050	.070	.83	Trace	16.02	1.34	110.2	18.9	82		
October 11		1,120	1.021	9.50	7.80	.41	.021	.202	.669	.099	.30 / .40	.643	.534	.043	.066	.89	9	14.40	1.79	119.3	30.8	74	[a]6.80 / 11.77	[a]12.22 / 21.15
October 12	71.2	840	1.024	9.88	8.22	.48	.046	.204	.643	.099	.19 / .29	.687	.562	.057	.068	.79	9	9.45	2.20	91.5	24.6	73		
October 13		920	1.025	10.69	8.85	.39	.014	.247	.617	.099	.47 / .57	.692	.576	.052	.064	.90	14	10.98	1.72	39.3	12.0	69		
October 14	71.2	860	1.025	10.85	8.97	.53	.020	.216	.610	.099	.41 / .51	.734	.609	.044	.081	.79	13	11.34	1.63	161.3	40.2	75		
Average	71.4	1,087	1.022	9.66	7.97	.43	.031	.211	.629	.099	.28 / .38	.661	.547	.049	.064	.80	11	13.62	1.62	106.5	24.7	76	1.68	3.02

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		93.23
Nitrogen in excreta:		
Urine	67.65	
Feces	11.77	
		79.42
Nitrogen balance		+13.81

	Grams.
Ether extract in food	945.20
Ether extract in feces	21.15
Fat utilized	924.05

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c.c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Perct.*	*Gms.*	*Gms.*
October 15	......	1,040	1.023	9.77	7.85	0.57	0.035	0.241	0.610	0.169	0.30 / .47	0.742	0.568	0.051	0.123	0.66	Trace	15.39	1.43	88.7	17.7	80		
October 16	......	1,040	1.020	9.18	7.40	.49	.027	.200	.595	.169	.30 / .47	.648	.514	.056	.078	.67	Trace	14.76	1.75	95.9	21.5	77		
October 17	71.2	1,100	1.022	8.75	7.17	.39	.025	.207	.569	.169	.22 / .39	.700	.557	.056	.087	.76	Trace	14.94	1.45	85.7	19.7	77		
October 18	......	1,100	1.022	8.21	6.64	.32	.015	.232	.610	.169	.22 / .39	.583	.473	.027	.083	.84	Trace	16.74	1.22	125.6	31.1	75	a6.86 / 9.65	a12.18 / 17.13
October 19	70.7	860	1.025	9.29	7.52	.37	.033	.185	.636	.169	.38 / .55	.664	.518	.045	.101	.80	Trace	12.42	1.61	70.2	19.6	72		
October 20	......	1,050	1,023	9.45	7.79	.37	.037	.219	.636	.169	.23 / .40	.667	.519	.046	.102	.70	Trace	12.78	1.45	69.5	19.1	72		
October 21	70.7	840	1.025	9.83	8.26	.38	.032	.215	.636	.169	.14 / .31	.756	.596	.038	.122	.74	Trace	9.54	1.63	41.7	11.9	71		
Average	70.9	1,004	1.026	9.21	7.52	.41	.029	.214	.613	.169	.26 / .43	.680	.535	.045	.099	.74	Trace	13.80	1.51	82.5	20.1	75	1.38	2.45

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		89.87
Nitrogen in excreta:		
Urine	64.48	
Feces	9.65	
		74.13
Nitrogen balance		+15.74

SECOND BENZOATE PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. =100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c.c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 22		1,160	1.022	9.94	8.08	0.45	0.010	0.201	0.610	0.380	0.21 .59	0.707	0.563	0.050	0.094	0.83	Trace	14.94	1.61	100.5	25.8	74		
October 23		800	1.025	9.72	7.83	.49	.042	.156	.595	.380	.23 .61	.675	.534	.065	.076	.80	Trace	9.00	2.00	111.8	25.8	76		
October 24	70.7	960	1.025	9.83	7.88	.37	.038	.191	.602	.380	.36 .74	.613	.504	.055	.044	.76	Trace	10.62	1.22	80.1	21.4	73		
October 25		880	1.022	8.42	6.72	.41	.022	.180	.580	.380	.13 .51	.527	.411	.031	.085	.78	Trace	9.36	1.66	90.3	18.4	79	a6.51 9.23	a14.87 20.99
October 26	70.9	840	1.023	8.26	6.39	.36	.032	.173	.576	.380	.35 .73	.576	.443	.050	.083	.70	Trace	9.36	1.41	90.1	22.6	74		
October 27		1,130	1.025	8.96	7.02	.27	.027	.209	.621	.380	.43 .81	.722	.527	.051	.144	.82	Trace	15.48	1.32	50.1	14.7	70		
October 28	70.7	880	1.023	8.42	6.72	.41	.013	.162	.569	.380	.17 .55	.608	.480	.046	.082	.68	Trace	10.80	1.61	42.0	13.1	68		
Average	70.8	950	1.024	9.08	7.23	.39	.026	.182	.593	.380	.27 .65	.633	.495	.050	.086	.77	Trace	11.37	1.55	80.7	20.3	73	1.32	3.00

a Per cent.

BALANCES

		Grams
Nitrogen in food		81.83
Nitrogen in excreta:		
Urine	63.55	
Feces	9.23	
		72.78
Nitrogen balance		+9.05

	Grams
Ether extract in food	974.21
Ether extract in feces	20.99
Fat utilized	953.22

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FINAL AFTER PERIOD. SUBJECT L. M. L.

Date.	Body weight.	Urine.																	Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c.c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct*	*Gms.*	*Gms.*
October 29		1,120	1.020	9.01	7.52	0.37	0.021	0.168	0.576	0.190	0.15 / .34	0.641	0.488	0.051	0.102	0.75	Trace	12.78	1.77	43.1	9.0	79		
October 30		920	1.023	8.96	7.64	.36	.014	.190	.569	.190	.00 / .19	.680	.514	.058	.108	.80	Trace	12.24	1.84	61.5	16.2	73		
October 31	70.6	1,400	1.021	10.26	8.64	.32	.011	.238	.643	.190	.22 / .41	.727	.534	.061	.132	.91	Trace	18.54	1.61	120.2	20.8	82		
November 1		940	1.021	8.64	7.12	.39	.024	.180	.602	.190	.13 / .32	.675	.506	.043	.126	.78	Trace	12.78	1.93	150.8	30.0	80		
November 2	70.8	920	1.025	9.18	8.05	.27	.013	.191	.610	.190	.00 / .16	.672	.543	.054	.075	.75	Trace	11.16	1.47	132.1	34.4	73	a6.65	b13.62 / c14.76
November 3		880	1.021	8.58	7.11	.29	.022	.185	.621	.190	.16 / .35	.653	.530	.053	.070	.75	Trace	11.16	1.63	48.1	9.0	81	13.63	d15.04 / e13.96 / f29.00
November 4	70.6	840	1.025	10.48	8.76	.42	.019	.190	.602	.190	.30 / .49	.816	.651	.046	.119	.77	Trace	10.08	2.18	44.1	12.8	70		
November 5		800	1.022	11.17	9.50	.42	.011	.221	.621	.190	.21 / .40	.753	.593	.056	.104	.86	9	16.92	2.27	77.5	21.4	72		
November 6		1,060	1.020	11.02	9.45	.38	.005	.215	.621	.190	.16 / .35	.804	.648	.057	.101	.83	10	11.88	2.09	112.5	22.7	79		
November 7	71.1	1,150	1.022	11.23	9.23	.38	.016	.224	.595	.190	.60 / .79	.734	.577	.061	.096	.83	Trace	14.22	2.22	100.1	28.7	71		
Average	70.8	1,003	1.022	9.85	8.30	.36	.016	.200	.606	.190	.19 / .38	.716	.558	.054	.103	.80	......	13.18	1.90	89.0	20.5	76	1.36	d3.01 / e2.79 / f2.90

a Per cent. b Per cent Oct. 29–Nov. 3. c Per cent Nov. 3–8. d Oct. 29–Nov. 3. e Nov. 3–Nov. 8. f Oct. 29–Nov. 8.

BALANCES.

		Grams.
Nitrogen in food		132.32
Nitrogen in excreta:		
Urine	98.53	
Feces	13.63	
		112.16
Nitrogen balance		+20.16

	Grams.
Ether extract in food	652.54
Ether extract in feces	13.96
Fat utilized	638.58

FORE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. =100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 6	......	610	1.025	9.94	7.99	0.70	0.091	0.143	0.583	......	0.43	0.754	0.676	0.037	0.041	0.66	59	8.64	2.20	103.0	30.0	71		
July 7	67.0	710	1.023	9.83	7.82	.55	.080	.159	.669	0.028	.52 .54	......	.679	.052	......	.71	53	12.87	1.61	......	......	......		
July 8	......	790	1.030	10.08	8.28	.42	.101	.179	.602	.006	.50 .51	.824	.710	.068	.046	.63	40	15.70	2.07	211.8	62.3	71		
July 9	......	710	1.030	11.22	9.10	.57	.098	.164	.584	.041	.66 .70	.843	.674	.069	.100	.75	59	12.21	1.22	261.6	63.6	77	a5.51 13.85	a11.42 28.71
July 10	......	785	1.030	11.94	9.71	.67	.048	.186	.606	.108	.61 .71	.946	.780	.069	.097	.76	66	11.70	1.84	133.5	29.2	78		
July 11	67.1	750	1.025	10.23	8.33	.71	.072	.146	.606	......	.37	.743	.640	.056	.047	.66	39	11.22	1.72	145.0	31.0	79		
July 12	......	1,100	1.015	9.48	7.39	.65	.084	.160	.624	......	.58	.689	.563	.026	.100	.68	43	10.80	1.56	141.0	35.3	75		
Average	67.1	779	1.025	10.39	8.37	.61	.082	.162	.611	.046	.57 .52	.800	.675	.054	.072	.69	51	11.88	1.75	142.3	35.9	75	1.98	4.10

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		100.64
Nitrogen in excreta:		
Urine	72.72	
Feces	13.85	
		86.57
Nitrogen balance		+14.07

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FORE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 13	......	700	1.025	9.72	7.82	0.58	0.041	0.193	0.602	......	0.48	0.684	0.527	0.053	0.054	0.62	38	10.00	1.41	......	......	......		
July 14	67.1	740	1.030	10.69	8.61	.63	.056	.194	.624	......	.58	.818	.632	.082	.104	.68	100	12.24	1.13	93.9	28.6	70		b12.36
July 15	......	800	1.030	10.14	8.35	.41	.026	.178	.595	......	.58	.775	.552	.064	.159	.69	59	13.40	.81	109.0	36.4	67	a5.65	c11.42
July 16	......	700	1.028	9.99	8.46	.51	.040	.163	.613	......	.20	.759	.541	.059	.159	.61	71	10.26	1.59	53.9	14.9	72		d9.88
July 17	68.0	680	1.027	9.56	7.55	.50	.019	.179	.569	......	.74	.786	.603	.047	.136	.50	48	11.34	1.41	142.8	22.4	85	10.01	20.22
July 18	......	545	1.031	7.99	6.35	.56	.058	.140	.602	......	.28	.707	.491	.061	.155	.61	56	9.72	2.00	165.5	41.0	75		
July 19	......	900	1.018	8.32	6.26	.76	.057	.128	.636	......	.48	.606	.422	.043	.141	.51	31	9.18	1.36	106.3	33.8	68		
Average	67.6	724	1.027	9.49	7.63	.56	.042	.168	.606	......	.48	.734	.545	.058	.135	.60	58	10.88	1.39	96.0	25.3	73	1.67	d2.47 3.37

a Per cent. b Per cent July 13–17. c Per cent July 13–20. d July 13–17.

BALANCES.

		Grams.
Nitrogen in food		91.39
Nitrogen in excreta:		
Urine	66.41	
Feces	10.01	
		76.42
Nitrogen balance		+14.97

	Grams.
Ether extract in food	482.13
Ether extract in feces	9.88
Fat utilized	472.25

FIRST BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
July 20	68.4	700	1.026	7.72	5.67	0.59	0.043	0.169	0.602	......	0.65	0.687	0.485	0.054	0.148	0.60	51	11.16	1.86	162.6	41.8	74		
July 21	......	870	1.023	9.77	7.60	.64	.034	.151	.621	......	.73	.789	.558	.066	.165	.54	56	12.06	1.38	144.5	37.8	74		
July 22	......	1,410	1.020	10.58	7.94	.56	.039	.219	.676	0.034	.99 1.02	.786	.578	.067	.141	.74	53	19.08	1.66	89.7	27.2	70		
July 23	68.6	795	1.023	8.10	6.25	.55	.064	.129	.642	.020	.42 .44	723	.559	.032	.132	.55	36	13.14	1.59	133.2	29.3	78	[a]6.22 12.54	[a]13.20 26.61
July 24	......	620	1.030	8.42	6.81	.51	.026	.181	.676	......	.22	.766	.569	.052	.145	.63	57	11.16	1.66	233.0	42.6	82		
July 25	......	725	1.030	9.72	8.25	.50	.026	.176	.632	......	.14	.831	.636	.066	.129	.68	72	11.52	1.54	50.6	18.0	64		
July 26	68.6	1,460	1.017	9.50	7.60	.69	.041	.191	.621	......	.36	.665	.483	.052	.130	.69	56	13.50	2.47	16.1	4.9	70		
Average	68.5	940	1.024	9.12	7.16	.58	.039	.174	.639	.027	[b].71 .51	.750	.553	.056	.141	.63	54	13.09	1.74	118.5	28.8	73	1.79	3.66

[a] Per cent.

[b] 2 days.

BALANCE.

		Grams.
Nitrogen in food		102.10
Nitrogen in excreta:		
Urine	63.81	
Feces	12.54	
		76.35
Nitrogen balance		+25.75

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 27	68.8	610	1.026	8.05	6.01	0.52	0.050	0.170	0.669	......	0.64	0.712	0.499	0.050	0.163	0.70	47	10.44	1.72	130.1	23.8	82		
July 28	......	680	1.030	9.13	7.37	.51	.080	.149	.636	......	.39	.692	.472	.055	.165	.64	38	10.44	1.04	280.7	36.4	87		
July 29	68.8	740	1.028	9.77	8.10	.39	.040	.180	.658	......	.40	.784	.575	.064	.145	.58	45	11.88	1.02	82.0	22.4	73		
July 30	......	460	1.030	8.10	6.35	.62	.068	.114	.632	......	.32	.775	.576	.048	.149	.57	100	7.92	2.06	99.3	22.2	78	a6.43	a14.61
July 31	......	640	1.028	8.64	6.93	.57	.051	.151	.669	......	.27	.719	.523	.055	.141	.53	47	10.80	1.91	121.3	28.3	77	10.44	23.71
August 1	69.2	1,090	1.022	9.40	7.46	.48	.059	.159	.595	......	.65	.645	.445	.055	.145	.55	35	14.40	1.13	86.8	25.9	70		
August 2	......	1,380	1.015	8.96	7.21	.56	.054	.182	.643	......	.31	.786	.609	.058	.119	.63	49	13.14	1.50	12.2	3.3	73		
Average	68.9	800	1.026	8.86	7.06	.52	.057	.158	.643	......	.43	.730	.528	.055	.147	.60	52	11.29	1.48	116.1	23.2	77	1.49	3.39

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		90.24
Nitrogen in excreta:		
Urine	62.05	
Feces	10.44	
		72.49
Nitrogen balance		+17.75

	Grams.
Ether extract in food	1,035.76
Ether extract in feces	23.71
Fat utilized	1,012.05

FIRST BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. NH_3 nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Total acidity as oxalic acid.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.	Feces. Total nitrogen.	Feces. Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 3	68.9	595	1.028	8.32	6.36	0.66	0.080	0.160	0.621	......	0.44	0.616	0.483	0.050	0.083	0.64	46	9.90	1.95	61.1	17.2	72		
August 4	......	820	1.025	8.96	7.27	.36	.089	.144	.621	......	.46	.692	.483	.051	.158	.57	43	14.40	1.13	193.6	30.5	84		
August 5	69.8	895	1.022	8.75	6.87	.58	.065	.146	.676	......	.42	.680	.482	.046	.152	.56	32	13.86	1.36	67.0	15.4	77		
August 6	......	780	1.026	8.96	6.92	.58	.064	.140	.706	......	.55	.839	.606	.059	.174	.54	22	12.96	1.47	118.2	27.7	77	[a]6.41	[a]12.77
August 7	......	1,100	1.021	9.72	7.68	.48	.037	.204	.658	......	.66	.764	.576	.050	.138	.55	44	15.30	.98	172.7	36.0	79	11.33	22.56
August 8	70.1	700	1.028	8.10	6.24	.56	.056	.140	.617	......	.49	.734	.524	.043	.167	.53	37	12.78	1.59	130.9	29.4	77		
August 9	......	1,220	1.017	9.83	7.95	.69	.070	.153	.643	......	.33	.818	.617	.049	.152	.67	29	10.98	1.91	61.0	20.5	66		
Average	69.6	873	1.024	8.95	7.04	.56	.066	.155	.649	......	.48	.735	.539	.050	.146	.58	36	12.90	1.48	114.9	25.2	76	1.62	3.22

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		98.88
Nitrogen in excreta:		
Urine	62.64	
Feces	11.33	
		73.97
Nitrogen balance		+24.91

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Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine.																	Feces.					
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. =100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 10	70.1	620	1.030	9.01	7.04	0.57	0.067	0.171	0.650	0.074	0.44 .51	0.798	0.600	0.055	0.143	0.61	57	10.26	1.61	45.1	12.2	73		
August 11	......	1,100	1.020	10.69	9.02	.43	.070	.173	.643	.066	.29 .36	.712	.504	.065	.143	.60	29	11.70	1.22	154.2	37.6	76		
August 12	70.0	850	1.026	8.42	6.78	.51	.056	.173	.658	......	.24	.776	.547	.061	.168	.59	43	13.32	1.38	124.3	32.0	74	a6.64	a 15.74
August 13	......	660	1.027	8.64	6.66	.57	.059	.164	.722	......	.46	.796	.562	.063	.173	.61	53	11.34	1.77	153.0	31.6	79	10.12	23.99
August 14	......	710	1.028	8.75	7.10	.46	.031	.187	.658	......	.31	.697	.564	.045	.088	.56	26	13.41	1.34	167.2	28.6	83		
August 15	69.6	740	1.025	9.18	7.50	.50	.050	.148	.643	......	.34	.707	.515	.054	.138	.58	24	13.32	1.54	......	......	......		
August 16	......	1,860	1.015	9.24	7.33	.65	.083	.145	.632	......	.40	.665	.427	.127	.111	.55	39	15.10	1.66	42.7	10.4	76		
Average	69.9	934	1.024	9.13	7.35	.53	.059	.166	.658	.070	.37 .37	.736	.531	.067	.138	.59	39	12.64	1.50	98.1	21.8	77	1.45	3.43

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		86.86
Nitrogen in excreta:		
Urine	63.93	
Feces	10.12	
		74.05
Nitrogen balance		+12.81

FIRST BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Urine.																			Feces.				
	Body weight.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. =100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 17	70.4	1,460	1.015	9.18	7.23	0.50	0.046	0.186	0.636	....	0.58	0.643	0.454	0.067	0.122	0.58	88	13.68	1.02	93.9	19.1	80		
August 18	......	800	1.025	7.45	5.77	.39	.045	.173	.636	.....	.44	.648	.474	.046	.128	.59	33	12.06	1.18	114.0	30.4	73		
August 19	70.4	850	1.024	8.26	6.58	.39	.052	.170	.632	.....	.44	.742	.522	.053	.167	.49	56	12.78	0.98	147.6	34.6	77		
August 20	......	1,560	1.015	9.83	7.94	.43	...	.170	.617	......	......	.725	.554	.052	.119	.53	43	13.32	1.32	92.5	25.1	73	[a]6.81	[a]14.06
August 21	.....	1,300	1.016	8.10	6.46	.35	.027	.169	.610	.....	.48	.670	.564	.047	.059	.52	26	11.88	1.16	158.7	33.9	79	11.99	24.76
August 22	69.9	1,130	1.019	9.40	7.57	.37	.049	.176	.621	....	.61	.747	.552	.064	.131	.63	33	11.52	1.27	121.8	33.0	73		
August 23	...	1,640	1.017	9.24	7.37	.69	.107	.182	.617	....	.27	.691	.527	.036	.128	.62	27	11.88	2.19	...	...	...		
Average	70.2	1,249	1.019	8.78	6.99	.45	.054	.175	.624	...	.46	.681	.521	.052	.108	.57	44	12.45	1.30	104.1	25.2	76	1.71	3.54

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		86.29
Nitrogen in excreta:		
Urine	61.46	
Feces	11.99	
		73.45
Nitrogen balance		+12.84

	Grams.
Ether extract in food	874.35
Ether extract in feces	24.76
Fat utilized	849.59

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 24	70.0	760	1.027	9.07	7.18	0.54	0.050	0.211	0.658	0.010	0.42 .43	0.789	0.624	0.032	0.133	0.60	43	12.60	1.66	129.2	31.4	76		
August 25	......	720	1.028	10.26	8.37	.49	.066	.181	.636	.080	.44 .52	.732	.566	.052	.114	.54	52	10.26	1.45	123.8	31.1	75		
August 26	69.5	1,520	1.015	11.88	10.30	.55	.037	.199	.602	.100	.19 .29	.784	.633	.038	.113	.63	41	9.90	1.68	......	......	......	a7.21 12.18	a12.25 20.69
August 27	......	1,760	1.015	9.83	7.93	.50	.047	.176	.636	.053	.49 .54	.773	.587	.044	.142	.58	33	13.86	1.43	81.2	21.5	74		
August 28	......	740	1.026	7.93	6.40	.40	.030	.179	.650	......	.27	.792	.609	.073	.110	.58	49	10.26	1.07	255.6	50.5	80		
August 29	70.4	880	1.027	9.07	6.99	.52	.063	.173	.632	......	.69	.630	.476	.069	.085	.57	37	13.86	1.27	152.4	34.4	77		
August 30	......	1,300	1.017	7.99	6.06	.58	.045	.173	.632	......	.50	.571	.429	.047	.095	.56	22	12.60	1.72	......	......	......		
Average	70.0	1,097	1.022	9.43	7.60	.51	.048	.185	.635	.061	.39 .46	.728	.561	.051	.110	.58	40	11.91	1.47	106.0	24.1	77	1.74	2.96

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		90.61
Nitrogen in excreta:		
Urine	66.03	
Feces	12.18	
		78.21
Nitrogen balance		+12.40

FIRST BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 31	71.0	620	1.028	7.34	5.55	0.44	0.045	0.153	0.702	0.064	0.39 / .45	0.624	0.506	0.032	0.086	0.54	46	10.80	1.27	170.7	33.5	80		
September 1	......	560	1.030	8.64	7.15	.41	.048	.145	.636	.064	.19 / .25	.574	.460	.042	.072	.55	38	7.92	.95	......	......	......		
September 2	71.1	1,140	1.024	10.69	8.82	.41	.047	.182	.669	.064	.49 / .55	.754	.583	.046	.125	.66	45	15.30	1.07	147.1	30.6	79	a7.03 / 10.78	a11.31 / 17.35
September 3	......	1,320	1.019	9.61	8.01	.46	.038	.178	.643	.064	.22 / .28	.701	.553	.044	.104	.63	38	14.58	1.18	140.0	21.9	84		
September 4	......	1,080	1.022	8.10	6.49	.48	.032	.179	.621	......	.30	.717	.558	.025	.134	.62	28	12.51	1.22	102.0	26.9	73		
September 5	70.6	700	1.027	7.24	5.72	.43	.054	.157	.650	......	.23	.581	.509	.048	.024	.59	45	12.42	1.18	109.3	21.0	80		
September 6	......	880	1.022	10.04	8.12	.52	.058	.146	.617	......	.58	.598	.505	.052	.041	.62	43	9.54	1.47	81.7	19.5	76		
Average	70.9	900	1.025	8.81	7.12	.45	.046	.163	.648	.064	.32 / .38	.650	.525	.041	.083	.60	40	11.87	1.19	107.3	21.9	79	1.54	2.48

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		88.37
Nitrogen in excreta:		
Urine	61.66	
Feces	10.78	
		72.44
Nitrogen balance		+15.93

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT, J. F. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 7	71.3	940	1.020	8.91	7.28	0.55	0.005	0.163	0.636	0.038	0.24 / .28	0.622	0.519	0.054	0.050	0.62	33	11.52	1.32	102.7	12.0	88		
September 8	......	1,000	1.025	9.07	7.46	.42	.028	.210	.684	.038	.23 / .27	......	.521	.058	......	.68	77	15.12	0.95	79.9	21.6	73		
September 9	71.1	610	1.025	7.50	5.91	.51	.032	.148	.643	.038	.22 / .26	.598	.481	.035	.082	.62	33	7.47	1.22	92.4	19.8	79		
September 10	......	710	1.028	8.42	6.81	.48	.047	.155	.669	.038	.22 / .26	.642	.493	.058	.092	.64	47	11.88	1.34	75.0	19.9	73	a6.60 / 11.79	a12.10 / 21.62
September 11	......	720	1.025	9.34	7.61	.59	.033	.273	.636	.038	.16 / .20	.652	.531	.049	.072	.58	53	9.36	1.34	139.6	34.8	75		
September 12	70.8	700	1.028	9.40	7.27	.67	.007	.234	.643	.038	.54 / .58	.595	.497	.058	.040	.58	50	7.38	2.31	210.7	38.8	82		
September 13	......	1,620	1.019	10.80	9.07	.43	.049	.236	.632	.038	.35 / .39	.569	.478	.032	.059	.74	28	20.16	1.32	202.7	31.8	84		
Average	71.1	900	1.024	9.06	7.34	.52	.029	.203	.649	.038	.28 / .32	.613	.503	.049	.066	.64	46	11.84	1.40	129.0	25.5	79	1.68	3.09

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		91.70
Nitrogen in excreta:		
Urine	63.44	
Feces	11.79	
		75.23
Nitrogen balance		+16.47

	Grams.
Ether extract in food	930.96
Ether extract in feces	21.62
Fat utilized	909.34

FIRST BENZOATE PERIOD. SUBJECT, J. F. L.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 14......	70.7	880	1.025	9.12	7.51	0.54	0.049	0.174	0.632	0.094	0.13 / .22	0.670	0.550	0.042	0.078	0.69	38	11.97	1.43	78.5	14.7	81		
September 15......	......	1,180	1.020	10.15	8.31	.60	.057	.165	.676	.094	.25 / .34	.667	.552	.051	.064	.76	43	11.34	1.86	110.5	36.4	67		
September 16......	71.4	2,180	1.014	10.89	8.98	.46	.051	.200	.688	.094	.42 / .51	.671	.544	.042	.085	.73	48	18.04	1.47	......	......	......		
September 17......	......	660	1.025	8.96	7.16	.51	.045	.151	.676	.094	.33 / .42	.756	.616	.047	.093	.63	48	7.92	1.54	133.8	36.7	73	a6.40 / 11.24	a 11.80 / 20.73
September 18......	......	1,060	1.025	11.45	9.63	.41	.043	.216	.650	.094	.41 / .50	.770	.648	.045	.077	.70	43	15.48	1.09	269.0	48.5	82		
September 19......	71.4	1,550	1.015	10.91	9.15	.52	.081	.146	.643	.094	.28 / .37	.663	.554	.046	.063	.68	19	13.14	1.45	101.2	28.9	71		
September 20......	......	680	1.027	8.53	6.77	.52	.043	.155	.617	.094	.33 / .42	.687	.552	.034	.101	.62	25	10.08	1.25	38.4	10.5	73		
Average......	71.2	1,170	1.022	10.00	8.22	.51	.053	.172	.655	.094	.31 / .40	.698	.574	.044	.080	.69	38	12.57	1.44	104.5	25.1	75	1.61	2.96

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		92.04
Nitrogen in excreta:		
Urine	70.01	
Feces	11.24	
		81.25
Nitrogen balance		+10.79

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST AFTER PERIOD. SUBJECT, J. F. L.

Date.	Body weight.	Urine.																	Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 21	70.6	820	1.025	10.69	9.00	0.45	0.045	0.169	0.676	0.038	0.31 .35	0.803	0.639	0.041	0.123	0.64	31	10.98	1.29	92.3	27.0	70		
September 22	......	850	1.029	10.48	8.85	.33	.078	.163	.657	.038	.36 .40	.841	.675	.044	.122	.73	33	12.96	0.95	......	......	......		
September 23	71.1	820	1.025	10.91	9.26	.57	.065	.148	.621	.038	.21 .25	.761	.581	.061	.119	.67	32	12.60	1.81	......	......	......		
September 24	......	1,540	1.015	10.48	8.75	.54	.045	.137	.650	.038	.32 .36	.670	.540	.045	.085	.70	25	12.24	1.61	172.8	47.3	72		
September 25	......	1,560	1.016	10.15	8.36	.55	.023	.182	.658	.038	.34 .38	.701	.578	.053	.070	.68	38	15.48	1.50	121.8	29.4	75	a6.43 12.92	a13.73 27.58
September 26	70.8	960	1.024	8.53	6.80	.32	.064	.159	.684	.038	.46 .50	.650	.540	.051	.059	.66	29	13.14	0.91	82.5	22.9	72		
September 27	......	1,320	1.016	10.58	8.66	.52	.067	.155	.658	.038	.48 .52	.618	.507	.045	.066	.69	32	15.12	1.16	119.8	28.0	70		
September 28	70.7	1,260	1.017	9.66	7.88	.54	.059	.141	.632	.038	.37 .41	.742	.599	.059	.084	.63	43	11.52	1.32	......	......	......		
September 29	......	1,280	1.018	9.18	7.46	.48	.054	.144	.636	.038	.37 .41	.640	.511	.056	.074	.64	34	10.08	1.22	......	......	......		
September 30	70.8	1,550	1.017	9.40	7.99	.43	.027	.162	.650	.038	.10 .14	.695	.571	.061	.063	.68	37	13.68	1.27	153.0	46.3	69		
Average	70.8	1,196	1.020	10.01	8.30	.47	.053	.156	.652	.038	.33 .37	.712	.574	.052	.087	.67	33	12.78	1.30	74.2	20.1	72	1.29	2.76

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		126.38
Nitrogen in excreta:		
Urine	100.06	
Feces	12.92	
		112.98
Nitrogen balance		+13.40

	Grams.
Ether extract in food	1,203.30
Ether extract in feces	27.58
Fat utilized	1,175.72

SECOND BENZOATE PERIOD. SUBJECT, J. F. L.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 1		2,000	1.013	10.02	8.36	0.52	0.041	0.165	0.654	0.061	0.22 .28	0.629	0.505	0.053	0.071	0.72	34	13.20	1.51	21.1	7.8	63		
October 2	......	1,000	1.023	10.04	8.31	.55	.046	.177	.658	.061	.24 .30	.784	.659	.040	.085	.79	11	10.44	1.75	149.8	34.4	77		
October 3	70.6	1,400	1.017	10.48	8.74	.54	.044	.187	.658	.061	.25 .31	.687	.550	.057	.080	.66	61	13.14	1.36	109.5	30.9	71		
October 4	......	1,190	1.021	9.83	7.97	.56	.056	.176	.691	.061	.32 .38	.680	.541	.043	.096	.80	70	11.70	1.38	......	......	......	a6.79 8.92	a10.48 13.76
October 5	70.4	600	1.028	9.18	7.33	.66	.063	.121	.658	.061	.29 .35	.685	.574	.052	.059	.61	45	7.29	1.86	......	......	......		
October 6	......	1,240	1.021	11.39	9.49	.44	.050	.186	.684	.061	.48 .54	.667	.530	.081	.056	.69	34	12.96	1.22	116.1	27.8	76		
October 7	70.6	1,530	1.015	10.37	8.64	.59	.058	.138	.643	.061	.24 .30	.633	.530	.050	.053	.61	43	12.06	1.43	107.1	30.4	71		
Average	70.5	1,280	1.020	10.19	8.41	.55	.051	.164	.664	.061	.29 .35	.681	.556	.054	.071	.70	43	11.54	1.50	71.9	18.8	72	1.27	1.97

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		88.64
Nitrogen in excreta:		
Urine	71.31	
Feces	8.92	
		80.23
Nitrogen balance		+8.41

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT, J. F. L.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 8	......	1,905	1.015	9.54	7.99	0.47	0.061	0.159	0.647	0.085	0.15 / .24	0.659	0.550	0.049	0.060	0.71	22	16.80	1.21	128.4	33.0	74		
October 9	......	1,840	1.014	9.72	7.93	.53	.047	.128	.647	.085	.35 / .44	.664	.561	.052	.051	.66	30	14.80	1.51	135.0	22.7	83		
October 10	70.0	1,660	1.015	9.40	7.68	.48	.031	.176	.684	.085	.26 / .35	.705	.594	.043	.064	.70	34	13.86	1.45	97.7	18.9	80		
October 11	......	880	1.025	10.04	8.31	.50	.047	.180	.733	.085	.19 / .28	.746	.640	.029	.077	.71	34	10.62	1.47	......	......	......	[a]6.65 / 10.68	[a]11.21 / 18.00
October 12	69.8	1,400	1.018	11.99	10.17	.63	.034	.173	.658	.085	.24 / .33	.728	.608	.053	.068	.69	36	9.72	1.93	82.5	26.8	67		
October 13	......	840	1.023	10.04	7.84	.75	.025	.137	.658	.085	.55 / .64	.681	.588	.046	.047	.68	56	8.82	2.13	156.7	42.2	73		
October 14	70.5	1,320	1.022	10.63	8.64	.49	.015	.210	.669	.085	.52 / .61	.727	.595	.035	.097	.83	40	16.20	1.20	67.0	17.0	74		
Average	70.1	1,406	1.019	10.19	8.37	.55	.037	.166	.671	.085	.32 / .41	.701	.591	.044	.066	.71	36	12.97	1.56	95.3	22.9	75	1.53	2.57

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		83.53
Nitrogen in excreta:		
Urine	71.36	
Feces	10.68	
		82.04
Nitrogen balance		+1.49

	Grams.
Ether extract in food	788.85
Ether extract in feces	18.00
Fat utilized	770.85

SECOND BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 15	......	1,120	1.023	9.61	7.56	0.59	0.024	0.189	0.650	0.221	0.38 .60	0.710	0.578	0.042	0.090	0.68	38	15.48	1.32	66.2	14.3	78		
October 16	......	1,880	1.015	10.20	8.11	.47	.023	.181	.639	.221	.56 .78	.697	.569	.036	.092	.69	38	19.20	1.39	109.2	27.4	74		
October 17	70.0	770	1.025	7.88	6.10	.43	.025	.157	.636	.221	.31 .53	.688	.569	.049	.070	.66	33	10.98	1.32	......	......	......		
October 18	......	700	1.026	9.83	8.04	.39	.040	.176	.684	.221	.28 .50	.719	.629	.034	.056	.62	40	9.18	1.18	97.7	26.5	72	a6.66 10.64	a10.10 16.14
October 19	69.7	1,250	1.020	12.10	10.14	.50	.023	.182	.643	.221	.39 .61	.680	.567	.035	.078	.81	32	10.26	1.36	93.3	24.0	74		
October 20	......	1,710	1.015	10.58	8.74	.55	.023	.168	.650	.221	.23 .45	.667	.525	.042	.100	.69	26	11.79	1.61	66.4	20.8	68		
October 21	70.1	1,400	1.020	9.23	7.47	.41	.026	.183	.632	.221	.29 .51	.753	.593	.037	.123	.66	15	15.30	1.11	167.2	46.8	72		
Average	69.9	1,261	1.021	9.92	7.88	.48	.026	.177	.648	.221	.35 .57	.702	.576	.039	.087	.69	32	13.17	1.33	85.7	22.8	73	1.52	2.31

a Per cent.

BALANCE.

	Grams.	Grams.
Nitrogen in food		82.84
Nitrogen in excreta:		
Urine	69.43	
Feces	10.64	
		80.07
Nitrogen balance		+2.77

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 22	......	860	1.027	9.45	7.39	0.60	0.016	0.164	0.676	0.392	0.21 / .60	0.709	0.585	0.050	0.074	0.75	20	12.24	1.84	55.3	14.0	74		
October 23	......	1,430	1.015	10.20	7.99	.59	.031	.158	.632	.392	.41 / .80	.644	.546	.037	.061	.65	19	10.71	1.56	88.7	23.3	73		
October 24	69.5	880	1.024	8.21	6.31	.39	.050	.180	.676	.392	.21 / .60	.656	.534	.057	.065	.75	24	11.34	.91	68.4	14.8	78		
October 25	......	750	1.025	9.18	7.16	.45	.045	.162	.621	.392	.35 / .74	.606	.508	.026	.072	.64	33	8.64	1.13	......	......	......	[a]6.30 / 7.46	[a]10.95 / 12.96
October 26	69.2	840	1.024	9.29	7.21	.56	.055	.145	.650	.392	.28 / .67	.648	.529	.049	.070	.60	45	7.92	1.38	99.0	31.0	68		
October 27	......	1,820	1.015	10.98	8.93	.37	.037	.189	.647	.392	.42 / .81	.757	.581	.038	.139	.77	29	14.20	1.26	119.7	35.3	70		
October 28	69.5	1,280	1.016	9.12	6.96	.60	.025	.148	.621	.392	.37 / .76	.687	.541	.035	.111	.63	29	9.90	1.59	......	......	......		
Average	69.4	1,094	1.021	9.49	7.42	.51	.037	.164	.646	.392	.32 / .71	.672	.546	.042	.085	.68	28	10.71	1.38	61.6	16.9	73	1.07	1.85

[a] Per cent.

BALANCES.

	Grams.	*Grams.*
Nitrogen in food		79.02
Nitrogen in excreta:		
Urine	66.43	
Feces	7.46	
		73.89
Nitrogen balance		+5.13

	Grams.
Ether extract in food	842.01
Ether extract in feces	12.96
Fat utilized	829.05

FINAL AFTER PERIOD. SUBJECT J. F. L.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 29	......	1,450	1.015	8.86	7.12	0.55	0.046	0.138	0.650	0.170	0.19 .36	0.706	0.564	0.058	0.084	0.72	33	13.23	1.66	153.3	36.5	76		
October 30	......	1,220	1.018	9.07	7.25	.48	.016	.164	.610	.170	.38 .55	.697	.544	.041	.112	.68	27	12.06	1.50	95.1	25.4	73		
October 31	70.1	1,580	1.016	8.75	7.06	.50	.008	.178	.684	.170	.15 .32	.672	.503	.062	.107	.66	22	14.58	1.52	......	......	......		
November 1	......	870	1.024	8.32	6.78	.35	.031	.153	.636	.170	.20 .37	.667	.527	.044	.096	.71	27	11.88	1.27	106.7	28.0	73		
November 2	70.0	920	1.019	9.40	7.51	.49	.023	.170	.610	.170	.43 .60	.692	.561	.058	.073	.66	36	9.90	1.43	297.6	48.9	83	a6.39	b11.50 c11.07
November 3	......	1,340	1.017	9.55	7.88	.49	.028	.165	.669	.170	.15 .32	.579	.487	.036	.056	.73	20	12.96	1.86	......	......	......	15.06	d15.96 e10.73 f26.79
November 4	70.5	1,260	1.021	9.29	7.75	.45	.017	.188	.632	.170	.08 .25	.742	.590	.043	.109	.71	33	15.39	1.61	......	......	......		
November 5	......	920	1.025	9.12	7.41	.53	.027	.155	.643	.170	.19 .36	.715	.561	.077	.077	.63	83	12.96	1.84	164.5	39.4	76		
November 6	......	1,230	1.019	9.83	8.19	.45	.018	.171	.691	.170	.14 .31	.721	.590	.057	.074	.65	39	11.70	1.88	......	......	......		
November 7	70.5	1,320	1.021	11.56	9.77	.43	.029	.193	.643	.170	.33 .50	.714	.582	.056	.076	.73	26	14.04	1.59	270.7	57.5	78		
Average	70.3	1,211	1.020	9.38	7.67	.47	.024	.168	.647	.170	.22 .39	.691	.551	.053	.086	.69	35	12.87	1.62	108.8	23.6	77	1.51	d3.19 e2.17 f2.68

a Per cent. b Per cent Oct. 29–Nov. 3. c Per cent Nov. 3–8. d Oct. 29–Nov. 3. e Nov. 3–8. f Oct. 29–Nov. 8.

BALANCES.

		Grams.
Nitrogen in food		130.84
Nitrogen in excreta:		
Urine	93.75	
Feces	15.06	
		108.81
Nitrogen balance		+22.03

	Grams.
Ether extract in food	651.65
Ether extract in feces	10.73
Fat utilized	640.92

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FORE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 6	......	895	1.025	13.18	11.21	0.62	0.046	0.211	0.535	......	0.46	1.011	0.799	0.091	0.121	0.86	31	11.88	2.54	118.5	27.0	77		
July 7	66.8	950	1.025	12.42	10.27	.53	.063	.207	.587	0.035	.73 .77	......	.808	.055	......	.94	15	14.49	2.40	53.0	15.0	72		
July 8	......	980	1.026	11.94	9.86	.46	.077	.211	.546	.010	.78 .79	.888	.742	.062	.084	.88	11	13.20	2.60	92.5	29.5	68		
July 9	......	1,160	1.022	12.54	10.34	.62	.035	.217	.584	.107	.64 .75	.935	.795	.062	.078	.95	20	17.71	2.36	242.6	36.6	85	a5.00 12.25	a15.42 37.78
July 10	......	1,010	1.023	12.78	10.31	.73	.030	.230	.557	.112	.82 .93	.998	.858	.009	.131	1.02	20	15.00	2.75	255.0	61.3	76		
July 11	67.2	1,040	1.021	12.94	10.80	.55	.076	.173	.520	......	.83	.915	.740	.067	.108	.93	39	14.52	2.55	70.4	24.0	66		
July 12	......	840	1.022	11.40	9.46	.50	.066	.180	.550	......	.65	.703	.618	.057	.028	.95	43	13.40	1.81	167.3	51.6	66		
Average	67.0	982	1.023	12.46	10.32	.57	.056	.204	.554	.066	.74 .70	.908	.766	.058	.092	.93	26	14.31	2.43	142.8	35.0	73	1.75	5.40

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		109.88
Nitrogen in excreta:		
Urine	87.20	
Feces	12.25	
		99.45
Nitrogen balance		+10.43

FORE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehlings sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Perct.	Gms.	Gms.
July 13	......	740	1.024	10.92	9.37	0.60	0.051	0.181	0.572	......	0.15	0.706	0.554	0.053	0.099	0.77	13	10.80	1.66	125.4	27.0	79		
July 14	67.2	870	1.026	10.58	8.50	.63	.043	.231	.569	......	.61	.749	.601	.064	.084	.85	14	14.04	1.50	155.5	31.4	80		
July 15	......	1,040	1.023	12.21	10.29	.45	.022	.250	.595	......	.63	.993	.780	.052	.161	.98	9	13.60	1.66	113.9	26.4	77		{b13.05
July 16	......	985	1.021	10.85	9.29	.65	.038	.169	.539	......	.16	.791	.606	.058	.127	.74	10	11.52	2.31	199.5	53.0	73	a5.28	{c12.67
July 17	67.7	930	1.015	9.83	7.94	.59	.020	.214	.543	......	.52	.860	.629	.037	.194	.67	8	14.68	1.91	71.5	17.5	76	12.75	{d17.98
July 18	......	730	1.025	8.86	7.24	.43	.046	.185	.587	......	.37	.710	.506	.052	.152	.70	8	11.34	2.04	178.3	44.0	75		{28.60
July 19	......	820	1.014	8.64	6.91	.43	.049	.173	.569	......	.51	.672	.487	.052	.133	.66	16	11.52	1.68	166.1	42.2	75		
Average	67.5	874	1.021	10.27	8.50	.54	.038	.200	.568	......	.42	.783	.595	.053	.136	.77	11	12.50	1.82	158.6	34.5	76	1.82	{d 4.50 4.69

a Per cent. b Per cent July 13–17. c Per cent July 13–20. d July 13–17.

BALANCES.

		Grams.
Nitrogen in food		86.55
Nitrogen in excreta:		
Urine	71.92	
Feces	12.75	
		84.67
Nitrogen balance		+1.88

	Grams.
Ether extract in food	397.44
Ether extract in feces	17.98
Fat utilized	379.46

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehlings sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
July 20	67.6	1,085	1.022	10.48	8.61	0.41	0.029	0.221	0.520	......	0.69	0.824	0.623	0.046	0.155	0.81	13	14.22	2.15	96.3	17.3	82		
July 21	......	860	1.024	11.12	9.17	.57	.036	.185	.569	......	.59	.890	.681	.034	.175	.76	12	10.62	2.43	151.0	34.7	77		
July 22	......	1,020	1.024	11.56	10.06	.50	.031	.239	.621	0.014	.09 .10	.928	.698	.060	.171	.95	13	15.30	2.36	146.6	34.5	76		
July 23	68.1	900	1.025	10.85	9.38	.53	.037	.176	.565	.022	.12 .14	.874	.687	.056	.131	.87	13	14.76	2.56	164.5	35.2	79	a6.08 15.13	a15.31 38.09
July 24	......	850	1.024	10.42	8.54	.53	.018	.189	.580	......	.57	.829	.632	.047	.150	.87	13	11.34	2.52	97.7	16.3	83		
July 25	68.3	1,460	1.020	12.42	10.64	.56	......	.230	.557	......	......	.927	.724	.052	.151	.98	24	15.66	2.65	130.7	29.8	77		
July 26	......	1,440	1.020	11.23	9.42	.50	.010	.221	.576	......	.50	.863	.625	.062	.176	.78	25	16.56	2.09	695.2	81.0	88		
Average	68.0	1,088	1.023	11.15	9.40	.51	.027	.209	.570	.018	.11 .43	.876	.667	.051	.158	.86	16	14.07	2.39	211.7	35.8	80	2.16	5.44

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		106.06
Nitrogen in excreta:		
Urine	78.08	
Feces	15.13	
		93.21
Nitrogen balance		+12.85

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehlings sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 27	67.7	720	1.021	9.18	7.30	0.48	0.058	0.151	0.587	......	0.60	0.774	0.516	0.078	0.180	0.75	142	9.90	2.34	256.3	16.0	94		
July 28	......	510	1.025	8.21	6.53	.49	.069	.129	.535	......	.46	.550	.399	.047	.104	.69	28	4.68	1.54	70.6	8.4	88		
July 29	67.2	740	1.024	9.94	8.55	.41	.026	.179	.535	......	.24	.635	.493	.048	.094	.75	29	7.74	1.61	158.7	28.0	82		
July 30	......	880	1.023	10.26	8.64	.49	.036	.189	.576	......	.32	.769	.567	.042	.160	.76	83	13.32	2.11	378.7	42.6	89	[a]5.88	[a]13.26
July 31	......	1,050	1.021	10.04	8.45	.52	.027	.213	.569	......	.27	.813	.614	.044	.155	.77	21	14.22	2.20	99.0	17.3	83	9.68	21.84
August 1	67.9	1,390	1.020	9.83	7.93	.60	.022	.236	.580	......	.46	.789	.564	.046	.179	.73	10	18.18	1.95	101.9	23.7	77		
August 2	......	880	1.022	8.96	7.48	.56	.041	.168	.569	......	.15	.816	.602	.044	.170	.69	8	9.18	1.68	127.8	28.7	78		
Average	67.6	881	1.022	9.49	7.84	.51	.040	.181	.564	......	.36	.735	.536	.050	.149	.73	46	11.03	1.92	170.4	23.5	84	1.38	3.12

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		76.86
Nitrogen in excreta:		
Urine	66.42	
Feces	9.68	
		76.10
Nitrogen balance		+0.76

	Grams.
Ether extract in food	841.64
Ether extract in feces	21.84
Fat utilized	819.80

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehlings sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 3	67.9	1,255	1.020	10.42	8.63	0.66	0.047	0.185	0.535	......	0.36	0.791	0.582	0.046	0.163	0.65	7	17.10	2.04	58.5	11.5	80		
August 4	......	1,060	1.021	9.50	8.09	.39	......	.187	.546	......	......	.740	.530	.040	.170	.68	10	14.58	1.52	169.2	36.6	78		
August 5	67.7	1,390	1.015	9.50	7.99	.54	.061	.157	.550	......	.20	.764	.556	.044	.164	.67	29	15.20	1.77	224.7	35.8	84	a5.91	a 11.41
August 6	......	1,150	1.018	9.56	8.02	.51	.063	.153	.587	......	.23	.747	.545	.052	.150	.71	11	12.78	2.04	269.1	43.5	80	12.68	24.49
August 7	......	1,600	1.015	9.40	7.44	.44	.029	.214	.587	......	.69	.700	.540	.049	.111	.69	21	14.94	1.54	123.5	20.4	83		
August 8	67.7	1,040	1.021	8.42	6.96	.39	......	.202	.535	......	......	.761	.526	.051	.184	.70	28	14.58	1.72	138.2	27.0	80		
August 9	......	820	1.024	10.04	8.51	.45	.057	.168	.565	......	.29	.890	.665	.045	.180	.68	9	10.62	1.88	150.7	39.8	74		
Average	67.8	1,188	1.019	9.55	7.95	.48	.051	.181	.558	......	.35	.770	.563	.047	.160	.68	16	14.26	1.79	162.0	30.7	80	1.81	3.50

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		91.95
Nitrogen in excreta:		
Urine	66.84	
Feces	12.68	
		79.52
Nitrogen balance		+12.43

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehlings sol. =100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 10	67.9	1,360	1.019	10.91	9.33	0.50	0.050	0.193	0.543	0.06	0.23 / .29	0.821	0.619	0.052	0.150	0.83	19	16.92	2.00	94.3	20.0	79		
August 11 [a]																				23.1	5.0	78		
August 12	67.6	1,080	1.018	9.66	8.14	.44	.038	.166	.546		.33	.794	.558	.051	.185	.72	15	11.70	2.00	116.1	28.0	76	[b] 6.49	[b] 15.31
August 13		1,060	1.020	10.63	8.80	.49	.026	.205	.632		.48	.818	.588	.055	.175	.81	10	9.54	2.36	160.3	32.7	80	10.73	25.31
August 14		970	1.024	9.83	8.45	.36		.224	.580			.774	.588	.047	.139	.79	8	14.40	1.81	105.9	23.1	78	$-\frac{1}{7}=$	
August 15	68.5	1,140	1.021	9.40	7.99	.32	.004	.223	.595		.27	.746	.540	.055	.151	.66	Trace	16.74	1.50	54.0	12.3	77	9.20	
August 16		1,170	1.020	9.18	7.74	.41	.038	.191	.565		.24	.707	.510	.059	.138	.67	7	17.82	1.50	195.4	44.2	77		
Average	68.0	1,130	1.020	9.94	8.41	.42	.031	.200	.577	.06	.23 / .32	.777	.567	.053	.156	.75	12	14.52	1.86	107.0	26.5	78	1.53	3.62

[a] This day's urine was lost.

[b] Per cent.

BALANCE.

		Grams.
Nitrogen in food		80.17
Nitrogen in excreta:		
Urine	59.61	
Feces	9.20	
		68.81
Nitrogen balance		+11.36

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. NH_3 nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Total acidity as oxalic acid.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.	Feces. Total nitrogen.	Feces. Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 17	68.2	1,140	1.020	9.88	8.10	0.43	0.018	0.211	0.595	......	0.53	0.754	0.540	0.050	0.164	0.66	11	16.20	1.63	83.5	15.5	81		
August 18	......	1,040	1.019	8.91	7.39	.33	.049	.174	.580	......	.39	.690	.475	.045	.170	.69	8	13.14	1.47	91.5	18.4	80		
August 19	68.2	960	1.021	9.07	7.39	.33	.013	.183	.576	......	.58	.759	.541	.036	.172	.63	14	13.68	1.77	266.8	39.2	85		
August 20	......	1,220	1.021	9.83	8.09	.39	.015	.216	.576	......	.54	.792	.585	.032	.175	.71	6	16.74	1.63	96.4	16.9	82	*a*6.50	*a* 13.72
August 21	......	990	1.021	8.64	7.14	.37	.008	.194	.557	......	.37	.786	.587	.030	.171	.67	9	13.14	1.70	140.8	27.8	80	11.71	24.71
August 22	68.5	1,080	1.021	9.83	8.22	.48	.038	.193	.587	......	.32	.756	.568	.046	.142	.73	9	13.32	2.00	113.8	25.6	78		
August 23	......	1,540	1.017	10.43	8.53	.45	.070	.179	.557	......	.64	.680	.531	.041	.108	.77	13	16.94	1.80	166.4	36.7	78		
Average	68.3	1,139	1.020	9.51	7.84	.40	.030	.193	.575	......	.48	.745	.547	.040	.157	.69	10	14.74	1.71	137.0	25.7	81	1.67	3.53

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		86.97
Nitrogen in excreta:		
Urine	66.59	
Feces	11.71	
		78.30
Nitrogen balance		+8.67

	Grams.
Ether extract in food	902.38
Ether extract in feces	24.71
Fat utilized	877.67

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 24	68.5	970	1.021	8.32	6.73	0.45	0.041	0.159	0.535	0.051	0.35 / .40	0.665	0.490	0.020	0.155	0.57	14	13.23	1.61	223.5	21.0	91		
August 25	......	990	1.022	9.77	8.01	.46	.038	.196	.595	.077	.40 / .48	.780	.578	.045	.157	.80	22	12.96	2.22	177.0	32.8	81		
August 26	68.4	1,720	1.015	10.09	8.74	.35	.016	.222	.543	.109	.11 / .22	.753	.563	.031	.159	.77	13	15.84	1.63	173.7	35.5	80	a6.65 / 13.53	a13.29 / 27.05
August 27	......	1,370	1.017	9.72	8.22	.37	.023	.204	.569	.042	.29 / .33	.756	.576	.037	.143	.79	11	14.04	1.68	97.1	17.4	82		
August 28	......	945	1.024	9.07	7.57	.31	......	.210	.569	......	......	.714	.523	.059	.130	.73	20	12.87	1.54	131.9	27.2	79		
August 29	68.6	1,455	1.018	8.86	7.15	.41	.027	.204	.543	.....	.53	.601	.448	.058	.095	.66	8	17.67	1.32	149.6	28.2	81		
August 30	......	1,360	1.019	9.94	7.93	.50	.038	.189	.565	.....	.72	.704	.536	.049	.119	.65	10	13.32	1.81	168.1	41.4	75		
Average	68.5	1,259	1.019	9.40	7.76	.41	.031	.198	.560	.070	.29 / .45	.710	.531	.043	.137	.71	14	14.27	1.69	160.1	29.1	81	1.93	3.86

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		94.58
Nitrogen in excreta:		
Urine	65.77	
Feces	13.53	
		79.30
Nitrogen balance		+15.28

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 31	68.9	1,365	1.018	10.09	8.39	0.46	0.022	0.205	0.632	0.071	0.31 .38	0.670	0.540	0.038	0.092	0.64	11	15.50	1.84	74.1	11.6	84		
September 1	......	1,180	1.019	9.29	7.81	.40	......	.185	.565	.071	......	.635	.461	.035	.139	.68	9	12.78	1.50	202.8	23.2	88		
September 2	68.7	1,560	1.017	10.04	8.34	.41	.017	.212	.580	.071	.41 .48	.705	.545	.035	.125	.67	12	15.93	1.59	186.1	20.0	89	[a]6.33	[a]11.23
September 3	......	1,280	1.022	9.50	8.14	.39	.023	.208	.550	.071	.12 .19	.682	.529	.034	.119	.68	11	17.28	1.54	240.2	45.5	81	11.69	20.73
September 4	......	1,340	1.020	9.40	7.89	.37	.012	.211	.546	......	.38	.732	.545	.033	.154	.72	9	15.84	1.43	263.9	47.7	81		
September 5	68.5	1,120	1.021	9.50	7.87	.39	.008	.223	.550	......	.46	.564	.495	.041	.028	.75	7	14.40	1.68	122.3	26.4	78		
September 6	......	2,000	1.014	10.20	8.32	.38	.031	.193	.587	......	.69	.687	.539	.036	.112	.69	12	14.80	1.59	74.1	10.2	86		
Average	68.7	1,406	1.019	9.72	8.11	.40	.019	.205	.573	.071	.28 .43	.668	.522	.036	.110	.69	10	15.19	1.60	166.2	26.4	84	1.77	2.96

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		89.15
Nitrogen in excreta:		
Urine	68.02	
Feces	11.69	
		79.71
Nitrogen balance		+9.44

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
September 7	68.5	910	1.023	9.12	7.60	0.50	0.035	0.174	0.543	0.037	0.23 .27	0.653	0.528	0.036	0.089	0.68	11	12.24	2.13	144.5	15.5	89		
September 8	......	1,130	1.021	9.83	8.38	.31	.021	.221	.595	.037	.27 .31	.689	.586	.040	.113	.69	17	12.24	1.16	51.5	15.0	71		
September 9	68.7	1,060	1.020	9.45	8.10	.43	.033	.178	.557	.037	.12 .16	.689	.527	.038	.124	.74	8	11.52	1.93	153.6	35.3	77		
September 10	......	1,020	1.024	10.04	8.54	.37	.035	.218	.621	.037	.22 .26	.714	.573	.042	.100	.82	13	13.77	1.59	171.9	27.0	84	a6.71 11.04	a11.64 19.16
September 11	......	810	1.024	8.80	7.61	.38	.028	.188	.550	.037	.01 .05	.632	.519	.038	.075	.69	8	11.52	1.36	111.4	20.6	82		
September 12	68.5	830	1.025	9.61	8.27	.37	.014	.204	.602	.037	.11 .15	.623	.510	.051	.062	.72	8	12.60	1.81	253.8	36.5	86		
September 13	......	1.060	1.021	10.15	8.49	.48	.025	.202	.569	.037	.35 .39	.710	.543	.039	.128	.68	13	16.88	1.81	53.5	14.7	73		
Average	68.6	974	1.023	9.57	8.14	.41	.027	.198	.577	.037	.19 .23	.673	.534	.041	.100	.72	11	12.90	1.68	134.3	23.5	80	1.58	2.74

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		81.81
Nitrogen in excreta:		
Urine	67.00	
Feces	11.04	
		78.04
Nitrogen balance		+3.77

	Grams.
Ether extract in food	859.12
Ether extract in feces	19.16
Fat utilized	839.96

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 14......	68.2	1,160	1.022	10.15	8.47	0.55	0.013	0.218	0.576	0.089	0.23 .32	0.676	0.555	0.033	0.088	0.68	10	16.56	1.93	162.4	20.0	88		
September 15......	......	1,100	1.019	10.20	8.64	.54	.017	.215	.610	.089	.09 .18	.694	.565	.040	.089	.79	12	11.88	2.18	153.2	33.0	78		
September 16......	68.0	1,040	1.022	10.26	8.60	.48	.016	.218	.587	.089	.27 .36	.714	.557	.044	.113	.78	Trace	12.78	2.00	47.1	11.7	75		
September 17......	......	980	1.025	10.48	8.74	.44	.032	.226	.650	.089	.30 .39	.694	.548	.038	.108	.75	Trace	14.40	1.36	118.1	25.8	78	a6.07 8.17	a11.15 15.01
September 18......	......	1,120	1.022	10.26	8.72	.36	.022	.221	.580	.089	.27 .36	.732	.576	.039	.117	.77	13	15.66	1.50	141.8	26.3	81		
September 19......	68.4	920	1.024	9.29	7.58	.41	.026	.187	.580	.089	.49 .51	.690	.521	.055	.114	.76	7	13.32	1.66	35.9	7.0	81		
September 20......	......	1,220	1.019	9.94	8.11	.48	.032	.191	.550	.089	.49 .58	.588	.489	.036	.064	.68	Trace	14.76	1.59	36.1	10.8	70		
Average......	68.2	1,077	1.022	10.08	8.41	.47	.023	.211	.590	.089	.30 .39	.684	.544	.041	.099	.74	11	14.19	1.75	99.2	19.2	79	1.17	2.14

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		84.91
Nitrogen in excreta:		
Urine	70.58	
Feces	8.17	
		78.75
Nitrogen balance		+6.16

FIRST AFTER PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908	Kilos	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
September 21	68.2	1,080	1.022	9.94	8.43	0.48	0.046	0.176	0.617	0.054	0.14 .19	0.791	0.623	0.040	0.128	0.69	7	14.58	1.77	98.4	19.0	80		
September 22	.....	940	1.026	9.72	8.29	.35	.055	.192	.617	.054	.16 .21	.755	.601	.035	.119	.72	7	14.58	1.32	64.9	14.6	77		
September 23	68.3	1,120	1.023	10.26	8.76	.42	.019	.213	.569	.054	.22 .27	.727	.587	.036	.104	.76	10	16.20	1.68	72.3	20.9	71		
September 24	.....	970	1.022	9.55	7.95	.48	.045	.166	.595	.054	.26 .31	.693	.562	.034	.097	.76	Trace	13.14	1.95	271.7	37.3	86		
September 25	.....	1,180	1.020	10.63	8.95	.50	.017	.215	.602	.054	.29 .34	.684	.558	.036	.091	.73	Trace	14.04	2.18	100.0	19.5	80	a6.21 13.31	a14.37 20.79
September 26	68.0	1,200	1.018	9.61	7.97	.45	.065	.164	.636	.054	.27 .32	.685	.545	.036	.104	.71	Trace	13.86	1.79	80.8	16.4	79		
September 27	.....	1,310	1.018	10.15	8.49	.48	.047	.173	.595	.054	.31 .36	.630	.510	.035	.086	.71	Trace	12.06	1.43	31.6	8.5	73		
September 28	67.5	900	1.022	9.55	7.80	.52	.023	.186	.580	.054	.39 .44	.744	.600	.049	.095	.72	7	14.67	1.86	143.6	30.3	78		
September 29	.....	700	1.026	8.86	7.16	.40	.027	.164	.587	.054	.47 .52	.654	.519	.049	.086	.69	9	10.80	1.52	69.9	15.6	77		
September 30	67.8	960	1.026	10.04	8.58	.39	.....	.225	.580	.054	....	.653	.531	.040	.082	.76	7	14.76	1.47	191.2	32.2	83		
Average	68.0	1,036	1.022	9.83	8.24	.45	.038	.187	.598	.054	.27 .33	.702	.564	.039	.099	.73	8	13.87	1.70	112.4	21.4	78	1.33	2.08

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		122.85
Nitrogen in excreta:		
Urine	98.31	
Feces	13.31	
		111.62
Nitrogen balance		+11.23

	Grams.
Ether extract in food	1,248.98
Ether extract in feces	20.79
Fat utilized	1,228.19

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 1	......	1,200	1.019	9.83	8.05	0.54	0.026	0.187	0.602	0.050	0.37 / .42	0.625	0.489	0.039	0.096	0.72	Trace	13.68	1.70	35.4	6.6	81		
October 2	......	930	1.025	10.09	8.31	.60	.023	.213	.602	.050	.29 / .34	.710	.599	.034	.077	.76	14	14.40	2.00	124.1	24.9	79		
October 3	68.0	800	1.024	9.61	7.92	.56	.027	.209	.587	.050	.26 / .31	.635	.527	.044	.061	.68	22	11.70	1.86	150.3	33.4	77		
October 4	......	1,130	1.020	9.50	7.71	.50	.016	.211	.643	.050	.37 / .42	.536	.466	.033	.037	.68	14	15.30	1.32	120.9	30.3	74	a6.66 / 10.71	a 13.80 / 22.19
October 5	67.9	880	1.024	9.50	7.80	.63	.040	.165	.621	.050	.19 / .24	.707	.626	.041	.040	.69	8	13.50	2.27	102.1	21.0	79		
October 6	......	840	1.024	9.34	7.57	.42	.028	.183	.632	.050	.46 / .51	.653	.586	.039	.029	.68	10	13.32	1.66	68.9	16.0	76		
October 7	68.5	920	1.024	9.88	8.33	.42	.010	.208	.632	.050	.23 / .25	.558	.493	.034	.036	.68	Trace	14.76	1.52	98.5	28.6	70		
Average	68.1	957	1.023	9.68	7.96	.52	.024	.197	.617	.050	.31 / .36	.632	.541	.038	.054	.70	14	13.81	1.76	100.0	23.0	77	1.53	3.17

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		85.69
Nitrogen in excreta:		
Urine	67.75	
Feces	10.71	
		78.46
Nitrogen balance		+7.23

SECOND BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 8	......	960	1.025	9.29	7.64	0.46	0.040	0.185	0.602	0.090	0.27 / .36	0.655	0.567	0.040	0.048	0.68	8	16.56	1.68	118.8	21.7	82		
October 9	......	1,040	1.023	9.99	8.39	.46	.010	.213	.580	.090	.25 / .34	.659	.568	.028	.063	.68	8	15.12	1.61	242.0	35.3	85		
October 10	68.2	1,360	1.019	9.40	7.80	.52	.012	.211	.643	.090	.12 / .21	.653	.541	.042	.070	.71	Trace	18.18	1.77	130.4	19.2	85		
October 11	......	1,180	1.020	9.07	7.28	.50	.042	.178	.643	.090	.34 / .43	.569	.471	.028	.059	.68	8	15.84	1.72	35.6	10.7	69	[a] 6.30 / 9.85	[a] 12.94 / 20.23
October 12	67.6	760	1.026	8.47	6.80	.54	.020	.180	.621	.090	.22 / .31	.650	.500	.041	.109	.67	8	12.06	2.18	87.8	24.0	72		
October 13	......	800	1.025	9.50	7.69	.46	.024	.180	.610	.090	.45 / .52	.608	.493	.040	.075	.74	16	11.79	1.81	156.7	29.2	81		
October 14	68.1	1,060	1.023	9.66	7.80	.51	.023	.200	.602	.090	.43 / .52	.646	.500	.043	.103	.69	11	17.46	1.66	62.7	16.2	74		
Average	68.0	1,023	1.023	9.34	7.63	.49	.024	.192	.614	.090	.30 / .39	.634	.520	.037	.075	.69	10	15.29	1.78	119.1	22.3	78	1.41	2.89

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		86.15
Nitrogen in excreta:		
Urine	65.38	
Feces	9.85	
		75.23
Nitrogen balance		+10.92

	Grams.
Ether extract in food	922.99
Ether extract in feces	20.23
Fat utilized	902.76

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT E. C. M.

Date.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. NH_3 nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Total acidity as oxalic acid.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.	Feces. Total nitrogen.	Feces. Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 15	......	1,020	1.024	9.18	7.25	0.42	0.004	0.230	0.587	0.154	0.54 .69	0.625	0.536	0.038	0.051	0.65	Trace	16.74	1.29	42.5	11.0	74		
October 16	......	1,280	1.020	9.55	7.79	.53	.027	.178	.565	.154	.31 .46	.603	.499	.026	.078	.66	Trace	19.62	1.97	349.5	38.3	89		
October 17	67.8	780	1.023	8.10	6.43	.54	......	.187	.602	.154	......	.576	.462	.039	.075	.58	9	13.32	1.88	24.5	5.1	79		
October 18	......	880	1.022	9.83	......	.43	.026	.196	.587	.154	......	.633	.533	.030	.070	.70	Trace	13.14	1.59	40.0	10.5	73	a 6.45	a 13.03
October 19	67.6	840	1.024	9.94	8.08	.51	.020	.200	.595	.154	.38 .53	.672	.528	.040	.104	.68	9	12.42	1.77	32.3	9.7	69	8.56	17.29
October 20	......	1,270	1.021	10.58	8.56	.45	.004	.209	.610	.154	.59 .74	.707	.564	.037	.106	.63	Trace	16.20	1.43	120.7	27.0	77		
October 21	67.5	1,080	1.021	9.94	8.07	.46	.017	.232	.595	.154	.50 .65	.710	.542	.022	.147	.70	Trace	16.92	1.61	231.8	31.1	86		
Average	67.6	1,021	1.022	9.59	7.70	.48	.016	.205	.592	.154	.46 .61	.647	.523	.033	.090	.66	9	15.48	1.65	120.2	19.0	78	1.22	2.47

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		82.41
Nitrogen in excreta:		
Urine	67.12	
Feces	8.56	
		75.68
Nitrogen balance		+6.73

SECOND BENZOATE PERIOD. SUBJECT, E. C. M.

Date.	Body weight.	Urine.																	Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 22	......	920	1.023	9.07	7.08	0.64	......	0.198	0.587	0.361	......	0.717	0.569	0.046	0.102	0.67	7	15.66	1.97	28.8	8.5	70		
October 23	......	735	1.026	9.29	7.26	.63	0.027	.160	.535	.361	0.32 .68	.667	.518	.027	.122	.64	Trace	10.98	2.04	62.6	14.8	76		
October 24	67.4	880	1.023	9.50	7.51	.43	.035	.207	.610	.361	.35 .71	.576	.500	.053	.023	.66	11	13.50	1.50	138.3	29.8	78		
October 25	......	1,240	1.018	8.53	6.87	.41	.024	.176	.557	.361	.13 .49	.487	.407	.023	.057	.60	7	13.86	1.18	113.1	23.6	79	a6.91 11.70	a15.38 26.04
October 26	67.3	1,030	1.021	8.75	6.74	.50	.018	.187	.565	.361	.38 .74	.621	.513	.026	.082	.69	Trace	15.48	1.75	29.2	6.5	77		
October 27	......	1,140	1.023	9.66	7.96	.30	.024	.205	.580	.361	.23 .59	.704	.541	.039	.124	.73	Trace	17.46	1.34	193.7	46.4	76		
October 28	67.3	920	1.023	9.12	7.28	.55	.020	.153	.546	.361	.21 .57	.665	.537	.033	.095	.67	10	14.40	2.00	259.9	39.7	84		
Average	67.3	981	1.022	9.13	7.24	.49	.025	.184	.569	.361	.27 .63	.634	.512	.035	.085	.67	9	14.48	1.68	117.9	24.2	77	1.67	3.72

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		85.58
Nitrogen in excreta:		
Urine	63.92	
Feces	11.70	
		75.62
Nitrogen balance		+9.96

	Grams.
Ether extract in food	1,002.48
Ether extract in feces	26.04
Fat utilized	976.44

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FINAL AFTER PERIOD. SUBJECT, E. C. M.

Date.	Body weight.	URINE. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	FECES. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 29	......	1,120	1.020	8.96	7.40	0.49	0.039	0.157	0.569	0.150	0.16 / .31	0.667	0.546	0.051	0.070	0.77	11	13.32	2.43	84.6	12.0	85		
October 30	......	820	1.024	9.07	7.39	.39	.007	.215	.565	.150	.35 / .50	.697	.550	.036	.111	.76	Trace	13.32	1.72	31.8	10.4	67		
October 31	67.1	920	1.023	10.15	8.45	.52	......	.238	.636	.150	......	.756	.560	.062	.134	.74	17	14.58	1.52	163.6	36.7	77		
November 1	......	1,140	1.022	9.07	7.83	.43	......	.178	.636	.150	......	.643	.502	.014	.128	.73	Trace	16.20	1.63	54.5	13.0	76		
November 2	67.2	700	1.026	8.64	6.85	.50	.008	.194	.576	.150	.36 / .51	.714	.556	.050	.108	.66	9	11.07	1.61	165.3	40.6	75	[a]6.38	[b]14.11 / [c]16.75
November 3	......	740	1.025	9.34	7.78	.43	.019	.183	.576	.150	.20 / .35	.690	.566	.042	.082	.67	7	11.34	2.47	74.1	11.7	84	14.58	[d]35.31 / [e]15.90
November 4	67.4	1,350	1.021	11.34	9.72	.43	......	.252	.587	.150	......	.781	.603	.045	.133	.86	16	19.26	2.02	210.7	36.5	82		[f]19.41
November 5	......	920	1.023	9.77	7.87	.66	.031	.178	.576	.150	.31 / .46	.755	.590	.051	.114	.73	18	13.86	2.59	34.8	7.5	78		
November 6	......	700	1.025	9.72	8.21	.49	.006	.221	.557	.150	.09 / .23	.713	.567	.038	.108	.72	9	10.08	2.29	111.7	26.6	76		
November 7	67.1	980	1.024	10.15	8.29	.45	.012	.237	.565	.150	.45 / .60	.625	.484	.058	.083	.69	8	16.56	1.84	136.8	33.6	75		
Average	67.2	939	1.023	9.62	7.98	.48	.017	.205	.584	.150	.27 / .42	.704	.552	.045	.107	.73	12	13.96	2.01	106.7	22.9	78	1.46	[d]3.53 / [e]3.18 / [f]3.88

[a] Per cent. [b] Per cent Oct. 29–Nov. 3. [c] Per cent Nov. 3–8. [d] Oct. 29–Nov. 8. [e] Oct. 29–Nov. 3. [f] Nov. 3–8.

BALANCES.

		Grams.
Nitrogen in food		128.80
Nitrogen in excreta:		
Urine	96.21	
Feces	14.58	
		110.79
Nitrogen balance		+18.01

	Grams.
Ether extract in food	721.89
Ether extract in feces	19.41
Fat utilized	702.48

FORE PERIOD. SUBJECT, W. C. R.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 6	......	1,065	1.016	9.61	7.69	0.52	0.064	0.206	0.409	......	0.72	0.821	0.655	0.046	0.120	0.76	8	10.71	2.04	70.5	19.5	72		
July 7	52.6	890	1.019	9.50	7.14	[a] 1.23	.079	.178	.505	0.020	.35 .37	......	.652	.048	......	.82	84	9.90	......	67.5	21.7	68		
July 8	......	1,670	1.016	10.20	8.81	.43	.092	.156	.422	.007	.28 .29	.814	.640	.064	.110	.72	9	13.70	1.89	55.3	16.6	70		
July 9	......	2,155	1.010	11.48	9.72	.58	.083	.128	.468	.086	.41 .49	.887	.717	.048	.122	.77	12	12.32	1.28	60.5	20.8	66	[b] 5.70 12.43	[b] 11.19 24.41
July 10	......	1,820	1.012	10.68	8.78	.64	.099	.149	.517	.104	.40 .50	.777	.644	.055	.078	.73	8	12.80	1.66	259.2	59.2	77		
July 11	53.0	2,055	1.012	9.64	7.95	.50	.087	.157	.461	......	.48	.695	.539	.011	.145	.61	Trace	15.84	1.28	94.5	31.7	66		
July 12	......	1,800	1.010	8.40	7.06	.38	.092	.098	.427	......	.34	.615	.488	.037	.090	.64	Trace	11.60	.96	172.2	48.6	72		
Average	52.8	1,636	1.014	9.93	8.16	.51	.085	.153	.458	.054	.36 .46	.768	.619	.044	.123	.72	24	12.41	1.52	111.4	31.2	70	1.78	3.49

[a] The urine became alkaline owing to lack of toluol; hence NH_3 high.

[b] Per cent.

BALANCE.

		Grams.
Nitrogen in food		89.64
Nitrogen in excreta:		
Urine	69.51	
Feces	12.43	
		81.94
Nitrogen balance		+7.70

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FORE PERIOD. SUBJECT, W. C. R.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
July 13	......	1,040	1.016	8.88	7.34	0.70	0.063	0.155	0.479	......	0.14	0.621	0.489	0.041	0.091	0.64	8	9.80	1.56	64.7	18.7	71		
July 14	53.0	1,360	1.017	9.94	7.93	.60	.055	.170	.453	......	.73	.633	.537	.059	.037	.67	Trace	12.06	1.22	131.0	38.0	71		
July 15	......	1,980	1.011	8.04	6.68	.34	.063	.125	.450	......	.38	.651	.450	.043	.158	.70	Trace	12.60	1.06	60.8	14.9	75	a5.85	b10.80
July 16	......	1,680	1.015	8.42	7.17	.39	.060	.129	.472	......	.20	.622	.434	.035	.153	.62	Trace	11.34	1.52	140.2	38.0	73		c10.35
July 17	53.4	1,080	1.020	8.80	7.05	.46	.018	.174	.483	......	.61	.781	.584	.031	.166	.69	Trace	12.42	1.84	142.2	21.3	85	11.42	d11.84
July 18	......	1,175	1.018	9.29	7.91	.41	.074	.124	.450	......	.32	.687	.492	.033	.162	.63	7	10.08	1.50	122.5	40.5	67		20.20
July 19	......	1,350	1.013	7.56	6.02	.41	.065	.119	.453	......	.49	.608	.436	.038	.134	.53	Trace	9.90	1.22	84.6	23.8	72		
Average	53.2	1,381	1.017	8.70	7.17	.47	.057	.142	.463	......	.41	.658	.489	.040	.128	.64	......	11.17	1.42	106.6	27.9	73	1.63	d2.96 2.89

a Per cent. *b* Per cent July 13–17. *c* Per cent July 13–20. *d* July 13–17.

BALANCES.

		Grams.
Nitrogen in food		72.27
Nitrogen in excreta:		
Urine	60.93	
Feces	11.42	
		72.35
Nitrogen balance		-0.08

	Grams.
Ether extract in food	337.07
Ether extract in feces	11.84
Fat utilized	325.23

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. =100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
July 20	53.0	815	1.025	9.56	7.89	0.43	0.018	0.203	0.427	......	0.58	0.810	0.609	0.030	0.171	0.65	10	9.54	1.70	48.6	8.1	83		
July 21	......	1,495	1.013	9.40	7.70	.54	.060	.142	.472	......	.49	.747	.535	.035	.177	.63	Trace	9.36	1.59	24.5	6.2	67		
July 22	......	1,610	1.016	9.23	7.87	.53	......	.144	.520	0.020	......	.739	.539	.050	.150	.69	Trace	15.66	1.52	75.5	16.3	77		
July 23	53.2	635	1.024	6.37	5.07	.33	.076	.099	.457	.029	.28 .31	.533	.356	.038	.139	.54	Trace	7.92	1.32	51.5	14.2	72	a7.05 9.11	a10.67 13.79
July 24	......	840	1.021	7.94	6.43	.38	.043	.146	.479	......	.46	.627	.421	.061	.145	.55	Trace	8.10	1.34	38.5	9.7	75		
July 25	53.6	1,310	1.023	8.53	6.78	.56	.038	.157	.439	......	.56	.680	.504	.055	.121	.56	Trace	13.32	1.02	218.5	48.5	78		
July 26	......	1,520	1.015	7.45	6.45	.43	.032	.159	......	......	......	.655	.457	.031	.167	.65	Trace	14.76	1.63	102.5	26.2	74		
Average	53.3	1,175	1.020	8.35	6.88	.46	.045	.150	.466	.025	.28 .48	.684	.489	.043	.153	.61	......	11.24	1.45	79.9	18.5	75	1.30	1.97

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		80.81
Nitrogen in excreta:		
Urine	58.48	
Feces	9.11	
		67.59
Nitrogen balance		+13.22

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Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
July 27	52.8	690	1.025	7.45	6.18	0.32	0.054	0.146	0.491	......	0.26	0.655	0.452	0.033	0.170	0.65	Trace	10.08	1.25	40.5	7.5	81		
July 28	......	760	1.024	7.45	6.13	.45	.058	.120	.489	......	.21	.472	.338	.032	.102	.60	Trace	9.36	1.09	55.5	13.5	76		
July 29	53.2	1,360	1.015	7.34	6.22	.33	.028	.159	.468	......	.14	.590	.393	.040	.157	.54	Trace	12.06	1.07	43.5	12.3	72	a6.93	a10.71
July 30	......	850	1.019	7.45	6.25	.33	.044	.115	.453	......	.26	.669	.458	.048	.163	.54	13	9.30	1.16	43.3	10.2	76	8.59	13.28
July 31	......	880	1.023	7.67	6.47	.28	.029	.171	.489	......	.23	.658	.428	.041	.189	.52	8	11.70	1.25	120.9	28.2	77		
August 1	53.0	920	1.021	6.91	5.88	.28	.022	.146	.453	......	.13	.509	.317	.036	.156	.53	Trace	10.44	1.00	185.5	29.1	84		
August 2	......	1,040	1.020	6.91	5.62	.32	.038	.162	.502	......	.27	.571	.383	.018	.170	.62	Trace	12.60	1.36	89.2	23.2	74		
Average	53.0	929	1.021	7.31	6.11	.33	.039	.160	.478	......	.21	.589	.396	.035	.159	.57	11	10.80	1.17	82.6	17.7	77	1.23	1.90

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		73.40
Nitrogen in excreta:		
Urine	51.18	
Feces	8.59	
		59.77
Nitrogen balance		+13.63

	Grams.
Ether extract in food	703.93
Either extract in feces	13.28
Fat utilized	690.65

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Perct.	Gms.	Gms.
August 3	52.2	760	1.023	8.26	6.81	0.31	0.092	0.119	0.487	......	0.46	0.695	0.411	0.040	0.244	0.57	Trace	9.72	1.13	38.1	8.0	79		
August 4	......	1,040	1.021	7.56	6.25	.28	.055	.154	.468	......	.35	.603	.385	.032	.186	.61	Trace	13.86	1.09	67.3	17.3	74		
August 5	53.4	860	1.020	8.10	6.77	.30	.066	.141	.491	......	.33	.705	.491	.033	.181	.58	Trace	10.80	1.07	136.6	32.1	77		
August 6	......	905	1.019	8.26	7.03	.37	.059	.110	.509	......	.18	.576	.387	.043	.146	.54	Trace	10.08	1.11	91.3	25.3	72	a6.84	a 10.09
August 7	......	1,120	1.019	8.32	6.73	.40	.038	.202	.509	......	.44	.646	.448	.034	.164	.59	Trace	12.60	1.25	26.4	7.3	72	9.12	13.46
August 8	52.5	1,110	1.017	7.13	5.83	.32	.038	.133	.446	......	.36	.534	.346	.046	.142	.57	11	10.26	1.09	236.0	32.0	86		
August 9	......	1,180	1.018	8.21	6.85	.39	.054	.159	.491	......	.27	.697	.504	.041	.152	.59	Trace	12.42	1.63	36.7	11.4	69		
Average	52.7	999	1.020	7.98	6.61	.34	.057	.160	.486	......	.34	.637	.425	.038	.173	.58	......	11.39	1.18	90.3	19.1	76	1.30	1.78

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		75.18
Nitrogen in excreta:		
Urine	55.84	
Feces	9.12	
		64.96
Nitrogen balance		+10.22

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine.																	Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
August 10	52.5	690	1.025	8.37	7.03	0.31	......	0.122	0.468	0.071	......	0.596	0.448	0.035	0.113	0.55	9	7.92	1.43	17.3	3.2	81		
August 11	......	1,270	1.019	9.66	8.49	.26	0.048	.157	.461	.048	{0.20 .25}	.677	.471	.049	.157	.61	8	10.98	1.13	89.3	26.4	70		
August 12	52.6	970	1.016	8.32	7.33	.33	......	.135	.457	......	......	.638	.430	.034	.174	.58	10	7.92	1.16	90.5	21.6	76	[a]6.55	[a]13.75
August 13	......	820	1.020	8.91	7.50	.44	.051	.162	.554	......	.21	.659	.445	.038	.176	.54	12	9.90	1.68	102.9	23.2	77	7.61	15.98
August 14	......	1,110	1.026	9.18	7.81	.29	.033	.226	.502	......	.32	.692	.507	.043	.142	.58	Trace	14.76	1.34	194.7	27.6	86		
August 15	52.3	940	1.022	7.24	6.07	.30	.047	.121	.487	......	.22	.512	.363	.046	.103	.54	Trace	11.52	1.09	27.6	7.8	72		
August 16	......	1,440	1.015	7.24	5.81	.35	.041	.148	.487	......	.40	.490	.336	.030	.124	.54	Trace	14.76	1.27	28.6	6.4	78		
Average	52.5	1,034	1.020	8.42	7.15	.33	.044	.153	.488	.060	{.20 .28}	.609	.429	.039	.141	.56	10	11.11	1.30	78.7	16.6	77	1.09	2.28

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		70.45
Nitrogen in excreta:		
Urine	58.92	
Feces	7.61	
		66.53
Nitrogen balance		+3.92

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 17	53.2	1,570	1.015	7.45	6.05	0.32	0.035	0.160	0.505	......	0.38	0.571	0.381	0.046	0.144	0.58	13	13.68	1.13	98.8	22.3	77		
August 18	......	1,130	1.019	7.29	6.08	.18	.044	.140	.517	......	.33	.586	.374	.047	.165	.59	9	11.34	0.91	32.8	10.0	70		
August 19	53.0	1,340	1.015	6.96	5.53	.30	.057	.121	.502	......	.45	.640	.434	.043	.163	.56	16	13.50	1.36	63.8	16.9	73	a7.14	a 11.29
August 20	......	1,170	1.017	7.88	6.57	.29	.060	.144	.502	......	.32	.677	.457	.046	.174	.57	9	11.52	1.29	87.8	22.9	74	10.39	16.43
August 21	......	1,230	1.017	8.64	7.51	.22	.020	.182	.479	......	.23	.653	.517	.037	.099	.60	8	10.08	1.22	68.8	18.6	73		
August 22	53.3	1,420	1.015	8.86	7.42	.30	.032	.148	.509	......	.45	.650	.457	.047	.146	.68	Trace	12.24	1.41	187.0	27.8	85		
August 23	......	1,960	1.013	8.58	7.34	.32	.079	.143	.494	......	.20	.547	.419	.038	.090	.70	Trace	15.18	1.61	97.1	27.0	72		
Average	53.2	1,403	1.016	7.95	6.64	.28	.047	.163	.501	......	.34	.618	.434	.043	.140	.61	11	12.51	1.28	90.9	20.8	75	1.48	2.35

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		77.54
Nitrogen in excreta:		
Urine	55.66	
Feces	10.39	
		66.05
Nitrogen balance		+11.49

	Grams.
Ether extract in food	774.93
Ether extract in feces	16.43
Fat utilized	758.50

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	URINE.																		FECES.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 24	52.9	1,480	1.015	9.12	7.71	0.33	0.046	0.149	0.472	0.014	0.40 / .41	0.677	0.503	0.031	0.143	0.60	Trace.	12.51	1.47	75.1	16.4	78		
August 25	......	1,400	1.017	9.94	8.58	.33	.037	.163	.491	.056	.28 / .34	.710	.538	.037	.135	.68	Trace.	12.96	1.66	60.2	16.6	72		
August 26	53.1	1,745	1.014	8.80	7.70	.29	.012	.174	.483	.094	.05 / .14	.654	.478	.035	.141	.57	Trace.	12.24	1.36	122.8	31.6	74	a6.74 / 11.12	a11.74 / 19.37
August 27	......	1,520	1.017	8.91	7.57	.31	.036	.168	.483	.062	.28 / .34	.691	.512	.031	.148	.62	Trace.	12.60	1.43	60.5	15.0	75		
August 28	......	1,360	1.018	8.86	7.62	.26	.020	.171	.491	......	.30	.630	.505	.041	.081	.60	Trace.	11.61	1.27	71.9	18.2	75		
August 29	53.6	1,280	1.019	8.42	7.24	.32	.045	.157	.487	......	.17	.596	.432	.039	.125	.58	8	13.86	1.11	97.0	20.1	79		
August 30	......	1,740	1.014	7.13	6.09	.28	.056	.121	.472	......	.11	.479	.393	.014	.072	.60	Trace.	12.60	1.29	223.7	47.1	79		
Average	53.2	1,504	1.016	8.74	7.50	.30	.036	.158	.483	.057	.25 / .26	.634	.480	.033	.123	.61	......	12.63	1.37	101.6	26.4	76	1.59	2.77

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		82.21
Nitrogen in excreta:		
Urine	61.18	
Feces	11.12	
		72.30
Nitrogen balance		+9.91

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
August 31	53.6	980	1.019	7.72	6.54	0.21	0.040	0.156	0.543	0.086	0.14 .23	0.485	0.380	0.053	0.052	0.55	Trace.	9.90	0.95	87.7	11.5	86		
September 1	......	1,230	1.020	7.99	6.86	.16	.014	.136	.476	.086	.28 .37	.527	.382	.041	.103	.64	Trace.	10.80	.98	64.1	17.3	73		
September 2	54.1	1,720	1.014	7.99	......	.27	.046	.134	.502	.086	......	.667	.507	.029	.131	.57	9	11.88	1.04	53.0	11.4	78	a 7.27 8.59	a 10.61 12.54
September 3	......	1,470	1.017	8.26	6.93	.30	.030	.156	.502	.086	.26 .35	.608	.456	.034	.118	.59	9	11.34	1.22	85.5	18.3	78		
September 4	......	1,550	1.015	7.61	6.42	.28	......	.173	.461	......	......	.574	.421	.033	.120	.67	Trace.	12.96	1.20	63.0	14.1	77		
September 5	53.6	1,190	1.020	7.67	6.49	.37	.040	.142	.457	......	.17	.519	.401	.038	.081	.63	9	11.52	1.18	149.5	30.4	79		
September 6	......	1,380	1.016	7.67	6.48	.32	.054	.137	.491	......	.19	.504	.386	.027	.091	.65	Trace.	12.06	1.25	46.6	15.2	67		
Average	53.8	1,360	1.017	7.84	6.62	.27	.037	.148	.490	.086	.23 .26	.555	.419	.036	.099	.61	9	11.49	1.12	78.5	16.9	77	1.23	1.79

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		74.94
Nitrogen in excreta:		
Urine	54.91	
Feces	8.59	
		63.50
Nitrogen balance		+11.44

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 7	54.1	1,280	1.020	7.67	6.31	0.39	0.043	0.170	0.476	0.055	0.23 .28	0.539	0.404	0.047	0.088	0.70	Trace.	14.04	1.27	33.9	9.0	73		
September 8		1,280	1.017	8.80	7.62	.31	.023	.179	.520	.055	.10 .15	.687	.526	.046	.115	.68	20	13.32	1.13	105.7	30.3	71		
September 9	54.0	1,240	1.016	7.50	6.42	.28	.048	.122	.491	.055	.08 .13	.606	.479	.029	.098	.69	Trace.	10.08	1.29	199.4	38.7	81		
September 10		1,480	1.019	8.69	7.50	.28	.029	.178	.543	.055	.11 .16	.600	.433	.036	.131	.69	9	15.48	1.36	39.2	11.7	70	[a]6.72 10.62	[a]10.82 17.11
September 11		860	1.022	7.34	6.29	.30	.036	.146	.479	.055	.04 .09	.514	.411	.045	.058	.69	Trace.	10.44	1.34	193.4	39.6	80		
September 12	54.1	1,260	1.017	8.42	7.12	.28	.042	.142	.491	.055	.29 .34	.536	.406	.048	.082	.68	7	12.06	1.25	106.3	20.8	80		
September 13		1,950	1.012	8.52	7.30	.26	.018	.160	.468	.055	.26 .31	.489	.392	.024	.073	.67	Trace.	15.60	1.76	28.8	8.0	72		
Average	54.1	1,336	1.018	8.13	6.94	.30	.034	.157	.495	.055	.16 .21	.567	.436	.039	.092	.69	12	13.00	1.34	101.0	22.6	75	1.52	2.44

[a] Per cent.

BALANCES.

		Grams.
Nitrogen in food		80.86
Nitrogen in excreta:		
Urine	56.94	
Feces	10.62	
		67.56
Nitrogen balance		+13.30

	Grams.
Ether extract in food	788.18
Ether extract in feces	17.11
Fat utilized	771.07

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
September 14......	54.0	1,740	1.015	8.37	7.13	0.38	0.037	0.167	0.483	0.092	0.09 .18	0.579	0.471	0.041	0.067	0.68	Trace.	16.92	1.36	14.3	3.7	74		
September 15......	......	1,040	1.019	8.64	7.27	.40	.051	.140	.531	.092	.16 .25	.557	.465	.032	.060	.72	Trace.	9.09	1.93	65.2	15.6	76		
September 16......	54.2	1,430	1,018	9.94	8.50	.36	.033	.190	.520	.092	.24 .33	.670	.509	.042	.119	.68	7	14.40	1.41	122.1	27.7	77		
September 17......	......	1,360	1.019	9.07	7.64	.36	.042	.156	.543	.092	.24 .33	.658	.503	.040	.115	.69	11	12.42	1.47	230.1	21.8	91	*a*6.90 9.17	*a* 13.00 17.28
September 18......	......	1,300	1.016	8.69	7.57	.31	.024	.149	.450	.092	.10 .19	.591	.511	.023	.057	.66	16	12.78	1.22	170.7	31.3	82		
September 19......	54.1	1,460	1.015	9.07	7.73	.37	.065	.133	.502	.092	.18 .27	.561	.467	.047	.047	.67	10	10.80	1.38	37.1	6.8	82		
September 20......	......	1,600	1.014	7.56	6.24	.35	.047	.153	.446	.092	.23 .32	.477	.365	.035	.077	.61	Trace.	12.24	1.34	78.3	26.0	67		
Average	54.1	1,419	1.017	8.76	7.44	.36	.043	.155	.496	.092	.18 .27	.585	.470	.037	.077	.67	11	12.66	1.44	102.5	19.0	78	1.31	2.47

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		83.30
Nitrogen in excreta:		
Urine	61.34	
Feces	9.17	
		70.51
Nitrogen balance		+12.79

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

FIRST BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
September 21	54.0	1,450	1.015	8.53	7.30	0.37	0.034	0.166	0.517	0.048	0.10 .15	0.590	0.481	0.029	0.080	0.62	Trace	11.34	1.22	87.7	16.2	81		
September 22	......	980	1.022	9.18	7.96	.30	.031	.173	.531	.048	.14 .19	.664	.527	.050	.087	.64	Trace	11.52	1.09	139.5	22.0	84		
September 23	54.2	1,640	1.015	8.47	7.36	.37	.050	.119	.457	.048	.07 .12	.593	.472	.027	.094	.67	Trace	13.05	1.16	25.3	7.6	69		
September 24	......	1,380	1.015	8.58	7.17	.28	.057	.138	.461	.048	.43 .48	.616	.497	.036	.083	.68	Trace	11.52	1.63	102.0	14.8	85		
September 25	......	1,920	1.014	8.16	7.04	.40	.037	.153	.509	.048	0 .05	......	.424	.035	......	.76	Trace	14.00	1.36	109.0	24.7	77	a7.36	a 11.72
September 26	53.9	1,290	1.017	9.07	7.60	.39	.059	.164	.565	.048	.24 .29	.611	.494	.049	.068	.67	Trace	9.54	1.41	63.1	15.4	75	12.35	19.67
September 27	......	1,990	1.012	8.40	6.98	.34	.063	.115	.487	.048	.37 .42	.558	.443	.026	.089	.74	Trace	10.88	1.41	193.0	38.8	79		
September 28	53.9	1,040	1.018	9.01	7.56	.32	.060	.151	.487	.048	.38 .43	.623	.506	.043	.074	.69	Trace	12.06	1.20	56.0	15.4	72		
September 29	......	1,290	1.017	8.26	7.10	.25	.007	.146	.498	.048	.21 .26	.564	.424	.040	.100	.66	Trace	9.00	.68	26.1	5.1	80		
September 30	54.0	1,680	1.015	8.15	6.91	.43	.023	.146	.483	.048	.11 .16	.633	.501	.033	.099	.73	Trace	16.56	1.22	36.2	7.8	78		
Average	54.0	1,466	1.016	8.58	7.30	.35	.042	.147	.500	.048	.21 .26	.606	.477	.037	.086	.69	Trace	11.95	1.24	83.8	16.8	78	1.24	1.97

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		111.85
Nitrogen in excreta:		
Urine	85.81	
Feces	12.35	
		98.16
Nitrogen balance		+13.69

	Grams.
Ether extract in food	1,200.41
Ether extract in feces	19.67
Fat utilized	1,180.74

SECOND BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine: Volume.	Urine: Specific gravity.	Urine: Total nitrogen.	Urine: Urea nitrogen.	Urine: NH_3 nitrogen.	Urine: Purine nitrogen.	Urine: Uric acid nitrogen.	Urine: Creatinine nitrogen.	Urine: Hippuric acid nitrogen.	Urine: Undetermined nitrogen.	Urine: Total sulphur.	Urine: Inorganic sulphur.	Urine: Ethereal sulphur.	Urine: Neutral sulphur.	Urine: Phosphate phosphorus.	Urine: Indican (Fehling's sol. =100).	Urine: Chlorine as NaCl.	Urine: Total acidity as oxalic acid.	Feces: Weight: Moist.	Feces: Weight: Air dry.	Feces: Water.	Feces: Total nitrogen.	Feces: Ether extract.
1908.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	Per ct.	Gms.	Gms.
October 1		1,420	1.014	8.64	7.13	0.38	0.038	0.140	0.524	0.032	0.40 / .43	0.630	0.483	0.041	0.106	0.69	Trace	13.68	1.52	30.6	4.9	83		
October 2		1,620	1.014	9.99	8.42	.49	.050	.164	.535	.032	.30 / .33	.739	.591	.027	.121	.76	9	11.70	1.54	24.8	7.5	69		
October 3	53.8	1,380	1.018	9.83	8.36	.50	.042	.176	.509	.032	.21 / .24	.603	.520	.049	.034	.67	Trace	13.50	1.54	91.2	21.2	76		
October 4		1,980	1.013	9.48	7.97	.43	.044	.168	.546	.032	.29 / .32	.648	.497	.014	.137	.70	Trace	17.40	1.70	150.2	20.0	86	a7.40 / 9.57	a 11.76 / 15.37
October 5	53.6	1,000	1.018	9.34	7.82	.39	.045	.162	.543	.032	.35 / .38	.671	.578	.038	.055	.68	Trace	13.32	1.38	29.8	8.2	72		
October 6		1,560	1.014	9.55	8.31	.33	.067	.146	.520	.032	.14 / .17	.680	.536	.040	.104	.66	Trace	12.78	1.11	85.3	20.0	76		
October 7	54.4	1,690	1.015	8.26	7.01	.36	.021	.147	.509	.032	.15 / .18	.571	.449	.036	.086	.64	Trace	13.50	1.34	212.9	48.9	77		
Average	53.9	1,521	1.015	9.30	7.86	.41	.044	.158	.526	.032	.26 / .29	.649	.522	.035	.092	.69	Trace	13.70	1.45	89.3	18.7	77	1.38	2.20

a Per cent.

BALANCE.

		Grams.
Nitrogen in food		83.47
Nitrogen in excreta:		
Urine	65.09	
Feces	9.67	
		74.76
Nitrogen balance		+8.67

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine.																		Feces.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 8	......	1,080	1.022	8.26	7.06	0.28	0.020	0.148	0.502	0.081	0.17 .25	0.576	0.480	0.037	0.059	0.66	Trace.	14.04	0.86	16.9	2.8	83		
October 9	......	1,390	1.018	8.15	6.88	.36	.040	.131	.487	.081	.17 .25	.576	.481	.021	.075	.62	Trace.	15.39	1.22	150.1	27.2	82		
October 10	54.3	1,920	1.014	8.52	7.03	.41	.025	.155	.546	.081	.27 .35	.596	.462	.046	.088	.71	Trace.	16.60	1.26	226.9	42.7	81		
October 11	......	1,940	1.010	9.00	7.44	.48	.043	.153	.565	.081	.24 .32	.604	.499	.028	.077	.69	Trace.	14.00	1.86	118.3	25.5	78	a6.90 9.46	a11.15 15.29
October 12	54.0	1,320	1.017	9.45	8.01	.36	.039	.157	.505	.081	.30 .38	.616	.483	.052	.081	.70	Trace.	11.70	1.34	103.1	17.8	83		
October 13	......	1,580	1.014	8.91	7.50	.33	.042	.135	.498	.081	.32 .40	.633	.486	.039	.108	.64	Trace.	12.96	1.18	65.2	15.0	77		
October 14	54.0	1,240	1.016	8.91	7.47	.41	.035	.145	.505	.081	.26 .34	.563	.448	.033	.082	.66	Trace.	11.16	1.41	30.0	6.1	80		
Average	54.1	1,496	1.017	8.74	7.34	.38	.035	.146	.515	.081	.25 .33	.595	.477	.037	.081	.67	Trace.	13.69	1.30	115.8	19.6	81	1.35	2.18

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		80.60
Nitrogen in excreta:		
Urine	61.20	
Feces	9.46	
		70.66
Nitrogen balance		+9.94

	Grams.
Ether extract in food	790.49
Ether extract in feces	15.29
Fat utilized	775.20

SECOND BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces: Weight, Moist.	Feces: Weight, Air dry.	Feces: Water.	Feces: Total nitrogen.	Feces: Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 15 . . .		1,600	1.017	7.67	6.06	0.42	0.031	0.176	0.491	0.187	0.30 / .49	0.571	0.439	0.034	0.098	0.60	Trace.	18.72	1.13	116.7	21.4	81		
October 16 . . .		1,620	1.014	7.61	5.95	.38	.038	.140	.509	.187	.41 / .60	.581	.452	.028	.101	.61	Trace.	16.74	1.45	67.5	8.4	87		
October 17 . . .	54.0	1,140	1.018	8.10	6.74	.39	.016	.168	.505	.187	.10 / .29	.561	.443	.040	.078	.62	Trace.	13.14	1.18	139.5	28.4	79		
October 18 . . .		2,040	1.010	8.71	7.43	.42	.036	.151	.543	.187	0 / .14	.598	.482		.110	.70	Trace.	15.18	1.61	44.1	11.2	74	[a]7.22 / 8.22	[a]10.00 / 11.39
October 19 . . .	53.8	1,220	1.015	8.32	6.73	.35	.032	.143	.517	.187	.36 / .55	.589	.449	.036	.104	.59	Trace.	11.70	1.27	97.6	22.0	77		
October 20 . . .		2,020	1.012	8.08	6.69	.31	.027	.140	.543	.187	.18 / .37	.536	.424	.029	.083	.70	Trace.	14.96	1.36	53.9	12.7	76		
October 21 . . .	53.9	1,540	1.017	9.45	7.83	.38	.025	.184	.498	.187	.35 / .54	.690	.532	.020	.138	.76	Trace.	16.38	1.32	36.2	9.8	72		
Average . . .	53.9	1,597	1.015	8.28	6.78	.38	.029	.157	.515	.187	.24 / .43	.589	.460	.031	.102	.65	Trace.	15.26	1.33	79.4	16.3	78	1.17	1.63

[a] Per cent.

BALANCE.

		Grams.
Nitrogen in food		78.33
Nitrogen in excreta:		
Urine	57.94	
Feces	8.22	
		66.16
Nitrogen balance		+12.17

Daily records of urine and feces of the individual subjects, showing chemical composition, nitrogen balance, etc., throughout the experiment—Continued.

SECOND BENZOATE PERIOD. SUBJECT W. C. R.

Date.	Body weight.	URINE.																		FECES.				
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 22	......	1,580	1.015	9.12	7.39	0.50	0.020	0.146	0.498	0.378	0.19 / .57	0.621	0.504	0.043	0.074	0.70	Trace	12.42	1.81	49.1	10.6	78		
October 23	......	1,330	1.016	9.55	7.85	.41	.048	.134	.491	.378	.24 / .62	.675	.560	.030	.085	.66	Trace	10.44	1.50	33.7	12.0	64		
October 24	53.9	1,480	1.014	8.86	7.17	.28	......	.151	.498	.378	....	.616	.482	.051	.083	.68	Trace	10.80	0.95	67.0	18.2	72		
October 25	......	2,120	1.010	8.71	7.06	.40	.040	.140	.505	.378	.19 / .57	.541	.451	.015	.075	.71	Trace	11.88	1.55	18.5	4.4	76	a6.95 / 8.25	a12.93 / 15.35
October 26	53.5	1,420	1.015	9.07	7.37	.41	.021	.166	.487	.378	.24 / .62	.630	.496	.028	.105	.59	11	10.08	1.32	133.8	27.9	79		
October 27	......	1,850	1.013	9.18	7.79	.31	.035	.163	.494	.378	.01 / .39	.672	.511	.033	.129	.76	Trace	14.20	1.37	152.1	31.9	79		
October 28	53.7	1,700	1.013	8.91	7.14	.48	.045	.121	.476	.378	.27 / .65	.655	.505	.024	.125	.65	Trace	10.62	1.72	48.1	13.7	71		
Average	53.7	1,640	1.014	9.06	7.40	.40	.035	.160	.493	.378	.19 / .57	.630	.501	.032	.096	.68	Trace	11.49	1.46	71.8	17.0	74	1.18	2.19

a Per cent.

BALANCES.

		Grams.
Nitrogen in food		76.14
Nitrogen in excreta:		
Urine	63.40	
Feces	8.25	
		71.65
Nitrogen balance		+4.49

	Grams.
Ether extract in food	764.97
Ether extract in feces	15.35
Fat utilized	749.62

FINAL AFTER PERIOD. SUBJECT W. C. R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100)	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
October 29	......	1,500	1.015	8.64	7.20	0.41	0.024	0.136	0.476	0.130	0.26 .39	0.651	0.509	0.045	0.097	0.66	9	16.92	1.54	48.4	8.7	82		
October 30	......	1,850	1.012	8.76	7.40	.34	.014	.158	.479	.130	.24 .37	.645	.504	.022	.119	.67	Trace	13.00	1.51	42.3	12.6	70		
October 31	53.5	2,055	1.014	9.64	8.05	.40	.008	.179	.565	.130	.31 .44	.659	.519	.059	.081	.72	Trace	17.16	1.77	310.8	49.9	83		
November 1	......	1,400	1.015	8.32	6.83	.41	.031	.155	.479	.130	.29 .42	.633	.475	.066	.092	.63	Trace	12.96	1.75	32.0	8.7	72		^{b}10.12
November 2	52.9	1,130	1.017	8.53	7.13	.32	.011	.164	.509	.130	.27 .40	.643	.515	.031	.097	.64	15	8.28	1.63	153.0	38.9	74	^{a}6.95	^{c}10.08 ^{d}19.04
November 3	......	1,610	1.012	8.80	7.19	.37	.006	.183	.491	.130	.43 .60	.625	.472	.040	.113	.67	11	10.08	1.81	......	......	......	13.09	^{e}12.02 ^{f}7.02
November 4	53.2	1,740	1.014	9.99	8.61	.41	......	.198	.505	.130	......	.736	.594	.032	.110	.69	7	15.84	1.56	......	......	......		
November 5	......	980	1.020	9.72	8.00	.53	.020	.166	.505	.130	.37 .50	.672	.515	.052	.105	.61	15	13.50	1.95	136.2	34.4	74		
November 6	......	1,020	1.015	9.23	7.87	.39	.006	.176	.509	.130	.15 .28	.653	.503	.049	.101	.66	8	9.72	1.75	50.9	8.3	83		
November 7	52.6	1,900	1.018	10.50	8.69	.37	.032	.190	.561	.130	.53 .66	.621	.476	.048	.097	.67	Trace	14.58	2.02	160.6	26.9	83		
Average	53.1	1,519	1.015	9.21	7.70	.40	.017	.171	.508	.130	.30 .45	.654	.508	.044	.101	.66	11	13.20	1.73	93.4	18.8	78	1.31	^{e}2.40 ^{f}1.40 ^{d}1.90

^{a} Per cent. ^{b} Per cent Oct. 29–Nov. 3. ^{c} Per cent Nov. 3–7. ^{d} Oct. 29–Nov. 7. ^{e} Oct. 29–Nov. 3. ^{f} Nov. 3–7.

BALANCES.

		Grams.
Nitrogen in food		112.87
Nitrogen in excreta:		
Urine	92.13	
Feces	13.09	
		105.22
Nitrogen balance		+7.65

	Grams.
Ether extract in food	483.46
Ether extract in feces	7.02
Fat utilized	647.44

AVERAGE DAILY COMPOSITION OF URINE AND FECES, WITH NITROGEN INTAKE FOR EACH OF THE SEVENTEEN PERIODS OF THE EXPERIMENT.

SUBJECT H. H. G.

Date.	Daily dose benzoate.	Daily intake of nitrogen.	Body weight.	Urine.																		Feces.				
				Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.[a]	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Gms.	Gms.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	P. ct.	Gms.	Gms.
July 6–12	0	15.28	51.0	1,042	1.024	12.59	10.76	0.48	0.067	0.147	0.451	0.064	0.68 .67	0.927	0.789	0.042	0.108	0.90	14	12.14	1.99	126.6	33.5	70	1.65	7.55
July 13–19	0	12.29	51.5	891	1.022	10.09	8.56	.44	.049	.166	.445	......	.43	.761	.567	.051	.143	.77	22	10.58	1.41	114.5	28.6	75	1.48	3.73
July 20–26	.3	12.98	51.9	919	1.020	9.85	8.29	.40	.040	.146	.464	.029	.43 .50	.728	.548	.052	.126	.74	25	10.81	1.65	121.1	26.9	76	1.68	2.73
July 27–Aug. 2	.3	11.76	52.1	1,029	1.017	9.49	8.05	.40	.029	.146	.456	......	.42	.739	.535	.056	.147	.70	20	10.70	1.29	66.6	18.3	73	1.11	2.39
Aug. 3–9	.3	11.88	52.6	1,095	1.018	8.27	6.78	.37	.049	.124	.463	......	.47	.635	.457	.048	.130	.65	14	12.15	1.24	99.3	22.9	75	1.36	2.62
Aug. 10–16	.3	12.00	52.8	957	1.019	8.83	7.45	.35	.039	.141	.472	.026	.38	.678	.492	.049	.137	.65	18	10.99	1.50	99.3	19.3	76	1.21	2.74
Aug. 17–23	.3	10.58	53.2	1,278	1.016	8.56	7.20	.27	.038	.143	.464	......	.45	.639	.464	.052	.123	.64	16	11.19	1.31	68.7	22.2	69	1.46	2.94
Aug. 24–30	.3	10.87	53.0	1,184	1.017	8.10	6.79	.32	.035	.135	.457	.051	.32 .38	.606	.454	.057	.106	.64	13	10.75	1.36	76.7	18.3	74	1.19	1.88
Aug. 31–Sept. 6	.3	11.43	53.5	1,269	1.016	7.99	6.56	.34	.045	.128	.466	.047	.46 .49	.555	.420	.044	.088	.62	15	11.11	1.36	102.6	19.7	78	1.38	2.33
Sept. 7–13	.3	11.72	53.7	1,156	1.016	8.42	7.12	.36	.043	.148	.482	.034	.23 .26	.571	.438	.053	.080	.69	12	13.02	1.35	124.9	21.6	80	1.42	2.49
Sept. 14–20	.3	11.59	54.1	1,178	1.016	8.64	7.12	.41	.047	.148	.476	.072	.37 .44	.588	.455	.048	.086	.68	10	12.52	1.45	113.2	24.3	78	1.64	3.11
Sept. 21–30	0	11.14	54.6	994	1.020	8.53	7.18	.35	.047	.134	.487	.037	.30 .34	.587	.459	.048	.080	.69	8	11.48	1.31	65.8	16.2	74	1.08	2.12
Oct. 1–7	.6	10.64	54.4	986	1.021	8.54	7.04	.39	.043	.142	.488	.063	.38 .44	.560	.450	.048	.061	.69	14	11.35	1.38	88.5	18.3	77	1.23	2.12
Oct. 8–14	1.0	11.96	54.5	1,237	1.018	8.44	6.96	.42	.035	.142	.493	.065	.33 .40	.571	.455	.046	.070	.66	16	12.87	1.35	106.9	18.5	79	1.28	1.89
Oct. 15–21	2.0	10.57	53.9	1,019	1.021	8.74	7.16	.37	.025	.152	.494	.171	.37 .54	.599	.460	.049	.090	.62	13	12.48	1.21	70.3	14.1	77	1.00	1.68
Oct. 22–28	4.0	11.06	53.8	1,066	1.018	8.87	7.04	.41	.035	.127	.477	.260	.52 .78	.614	.442	.044	.098	.64	11	10.18	1.31	60.7	15.9	78	.92	1.94
Oct. 29–Nov. 7	0	11.82	53.9	1,092	1.020	9.27	7.80	.37	.025	.146	.482	.170	.28 .45	.653	.516	.055	.082	.68	14	12.17	1.68	60.1	15.6	74	1.06	1.03

[a] With and without consideration of hippuric acid-nitrogen.

Average daily composition of urine and feces, with nitrogen intake for each of the seventeen periods of the experiment—Continued.

SUBJECT W. W. H.

Date.	Daily dose benzoate.	Daily intake of nitrogen.	Body weight.	Urine.																			Feces.				
				Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.[a]	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Gms.	Gms.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	P. ct.	Gms.	Gms.
July 6-12	0	14.32	51.3	1,026	1.023	12.57	10.76	0.44	0.045	0.201	0.490	0.054	0.65 / .59	0.882	0.729	0.039	0.073	0.94	58	12.59	2.13	112.8	30.7	73	1.35	5.34
July 13-19	0	12.68	51.5	991	1.021	11.06	9.51	.44	.018	.191	.505	......	.39	.779	.621	.055	.094	.89	43	10.44	1.84	103.2	30.0	71	1.50	3.32
July 20-26	.3	12.98	51.8	1,054	1.019	10.14	8.73	.39	.013	.192	.517	.021	.28 / .35	.790	.607	.042	.141	.79	23	11.57	1.72	104.6	23.6	76	1.48	2.12
July 27-Aug. 2	.3	11.99	52.0	1,041	1.019	9.16	7.78	.35	.006	.183	.513	......	.33	.726	.537	.041	.145	.78	27	11.83	1.59	65.8	17.2	75	1.12	1.75
Aug. 3-9	.3	9.26	51.6	1,084	1.017	9.27	7.99	.34	.021	.185	.514	......	.26	.736	.541	.047	.148	.68	....	10.11	1.22	87.4	16.0	79	0.99	1.74
Aug. 10-16	.3	12.05	51.2	1,167	1.019	9.68	8.36	.30	.017	.183	.512	.058	.26 / .31	.722	.549	.051	.124	.74	23	13.58	1.57	57.6	14.9	73	1.01	2.12
Aug. 17-23	.3	10.79	51.7	1,126	1.017	8.22	6.93	.23	.028	.174	.508	......	.35	.646	.472	.054	.120	.68	17	12.69	1.32	65.0	18.8	69	1.17	3.05
Aug. 24-30	.3	11.54	51.6	1,079	1.018	7.76	6.48	.29	.018	.167	.502	.045	.23 / .32	.605	.473	.048	.084	.62	19	12.20	1.33	91.5	19.6	78	1.38	2.04
Aug. 31-Sept. 6	.3	11.32	52.3	1,101	1.019	7.74	6.51	.28	.020	.167	.510	.068	.32 / .38	.642	.525	.039	.078	.62	17	12.66	1.20	74.8	18.2	76	1.33	1.84
Sept. 7-13	.3	11.91	52.5	1,024	1.020	7.88	6.65	.31	.016	.175	.517	.038	.16 / .20	.584	.489	.042	.061	.69	21	13.63	1.36	65.7	15.0	77	1.08	1.72
Sept. 14-20	.3	11.86	52.7	1,123	1.019	9.24	7.84	.35	.009	.188	.510	.032	.33 / .36	.636	.515	.045	.076	.61	20	13.20	1.29	79.5	19.4	75	1.23	2.02
Sept. 21-30	0	11.31	53.1	1,065	1.019	8.35	7.10	.32	.020	.167	.516	.023	.19 / .21	.587	.483	.043	.059	.69	17	13.35	1.15	59.4	14.0	74	0.94	1.74
Oct. 1-7	.6	11.88	53.6	1,160	1.019	8.65	7.32	.36	.011	.189	.530	.050	.20 / .25	.601	.498	.045	.057	.73	33	13.78	1.32	65.6	15.7	74	1.11	1.74
Oct. 8-14	1.0	12.06	53.7	1,279	1.019	8.39	7.04	.33	.013	.185	.537	.067	.26 / .33	.598	.503	.043	.051	.73	17	16.02	1.43	67.9	18.3	72	1.24	1.98
Oct. 15-21	2.0	12.26	54.1	1,394	1.018	9.03	7.55	.31	.009	.193	.526	.156	.36 / .52	.654	.542	.039	.072	.73	13	16.60	1.26	63.6	16.0	74	1.08	1.61
Oct. 22-28	4.0	11.58	54.2	1,243	1.017	8.91	7.13	.37	.011	.172	.513	.230	.49 / .72	.631	.512	.047	.073	.72	14	13.55	1.42	70.5	17.5	76	1.10	2.29
Oct. 29-Nov. 7	0	11.41	54.5	1,147	1.020	8.88	7.43	.33	.006	.189	.532	.190	.22 / .41	.635	.518	.050	.068	.73	20	13.48	1.72	68.5	15.9	75	1.06	1.54

[a] With and without consideration of hippuric acid-nitrogen.

Average daily composition of urine and feces, with nitrogen intake for each of the seventeen periods of the experiment—Continued.

SUBJECT L M. L.

Date.	Daily dose benzoate.	Daily intake of nitrogen.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.[a]	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Feces. Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Gms.*	*Gms.*	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*P. ct.*	*Gms.*	*Gms.*
July 6-12......	0	15.62	69.0	1,022	1.022	12.11	10.10	0.52	0.055	0.199	0.626	0.051	0.55 .62	0.864	0.741	0.052	0.075	1.06	12	11.49	2.43	139.3	41.6	69	2.13	6.45
July 13-19......	0	14.94	68.7	966	1.022	11.27	9.53	.45	.045	.199	.624	......	.42	.799	.627	.054	.113	1.01	25	9.73	2.11	129.2	34.9	72	1.74	4.94
July 20-26......	.3	14.76	69.4	1,064	1.020	11.74	9.94	.49	.033	.208	.608	.022	.25 .44	.894	.698	.044	.152	1.00	17	11.06	2.58	137.2	29.4	79	1.88	4.45
July 27-Aug. 2.	.3	12.45	69.5	846	1.022	9.74	8.12	.46	.030	.211	.608	......	.31	.752	.571	.040	.141	.88	9	9.77	1.75	111.4	23.2	78	1.55	3.38
Aug. 3-9.......	.3	12.71	69.4	1,013	1.020	9.53	7.82	.41	.034	.203	.611	......	.45	.737	.530	.047	.161	.73	12	11.93	1.62	100.1	24.1	74	1.55	3.29
Aug. 10-16.....	.3	11.81	69.3	935	1.021	9.22	7.72	.37	.043	.184	.601	.077	.24 .31	.697	.509	.043	.145	.72	10	11.46	1.74	95.4	21.2	77	1.38	3.46
Aug. 17-23.....	.3	11.40	69.8	1,084	1.018	8.18	6.71	.29	.031	.188	.596	......	.37	.609	.438	.040	.130	.71	T.	11.68	1.49	127.6	24.3	81	1.65	3.14
Aug. 24-30.....	.3	12.33	69.7	1,166	1.018	9.03	7.46	.32	.031	.200	.596	.057	.38 .43	.645	.490	.048	.107	.76	T.	11.01	1.63	109.4	24.0	78	1.60	3.55
Aug. 31-Sept. 6.	.3	12.19	69.6	1,076	1.019	8.58	7.10	.35	.031	.184	.594	.052	.31 .32	.590	.465	.036	.089	.71	T.	12.12	1.37	106.3	22.2	78	1.49	3.08
Sept. 7-13......	.3	13.14	70.2	1,100	1.020	9.32	7.87	.35	.033	.213	.607	.036	.21 .26	.614	.500	.041	.073	.79	T.	12.56	1.58	96.7	22.0	77	1.50	3.21
Sept. 14-20.....	.3	13.14	70.2	1,123	1.021	9.89	8.29	.36	.035	.196	.605	.104	.30 .40	.649	.526	.046	.077	.79	T.	13.67	1.60	104.3	22.5	78	1.40	3.10
Sept. 21-30.....	0	12.39	70.7	1,083	1.020	9.43	7.98	.34	.037	.182	.609	.027	.25 .28	.650	.528	.045	.076	.81	T.	12.92	1.57	86.1	20.5	76	1.34	2.98
Oct. 1-7........	.6	13.00	70.8	1.107	1.021	9.75	8.13	.40	.044	.204	.612	.071	.50 .37	.654	.544	.053	.058	.79	17	12.14	1.63	88.8	22.3	74	1.53	3.08
Oct. 8-14.......	1.0	13.32	71.4	1,087	1.022	9.66	7.97	.43	.031	.211	.629	.099	.28 .38	.661	.547	.049	.064	.80	11	13.62	1.62	106.5	24.7	76	1.68	3.02
Oct. 15-21......	2.0	12.84	70.9	1,004	1.026	9.21	7.52	.41	.029	.214	.613	.169	.26 .43	.680	.535	.045	.099	.74	T.	13.80	1.51	82.5	20.1	75	1.38	2.45
Oct. 22-28......	4.0	11.69	70.8	950	1.024	9.08	7.23	.39	.026	.182	.593	.380	.27 .65	.633	.495	.050	.086	.77	T.	11.37	1.55	80.7	20.3	73	1.32	3.00
Oct. 29-Nov. 7.	0	13.23	70.8	1,003	1.022	9.85	8.30	.36	.016	.200	.606	.190	.19 .38	.716	.558	.054	.103	.80	T.	13.18	1.90	89.0	20.5	76	1.36	2.79

[a] With and without consideration of hippuric acid-nitrogen.

Average daily composition of urine and feces, with nitrogen intake for each of the seventeen periods of the experiment—Continued.

SUBJECT, J. F. L.

Date.	Daily dose benzoate.	Daily intake of nitrogen.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. NH_3 nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.[a]	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Total acidity as oxalic acid.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.	Feces. Total nitrogen.	Feces. Ether extract.
1908.	*Gms.*	*Gms.*	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*P. ct.*	*Gms.*	*Gms.*
July 6–12	0	14.37	67.1	779	1.025	10.39	8.37	0.61	0.082	0.162	0.611	0.046	0.57 / .52	0.800	0.675	0.051	0.072	0.69	51	11.88	1.75	142.3	35.9	75	1.98	4.10
July 13–19	0	13.05	67.6	724	1.027	9.49	7.63	.56	.042	.168	.606	......	.48	.731	.545	.058	.135	.60	58	10.88	1.39	96.0	25.3	73	1.67	3.37
July 20–26	.3	14.58	68.5	910	1.024	9.12	7.16	.58	.039	.171	.639	.027	.71 / .51	.750	.553	.056	.141	.63	54	13.09	1.71	118.5	28.8	73	1.79	3.66
July 27–Aug. 2	.3	12.89	68.9	800	1.026	8.86	7.06	.52	.057	.158	.613	......	.13	.730	.528	.055	.147	.60	52	11.29	1.48	116.1	23.2	77	1.49	3.39
Aug. 3–9	.3	14.12	69.6	873	1.024	8.95	7.01	.56	.066	.155	.649	......	.48	.735	.539	.050	.146	.58	36	12.90	1.48	114.9	25.2	76	1.62	3.22
Aug. 10–16	.3	12.40	69.9	931	1.024	9.13	7.35	.53	.059	.166	.658	.070	.31 / .37	.736	.531	.067	.138	.59	39	12.64	1.50	98.1	21.8	77	1.45	3.43
Aug. 17–23	.3	12.32	70.2	1,249	1.019	8.78	6.99	.45	.051	.175	.524	......	.46	.681	.521	.052	.108	.57	44	12.45	1.30	104.1	25.2	76	1.71	3.54
Aug. 24–30	.3	12.94	70.0	1,097	1.022	9.43	7.60	.51	.018	.185	.635	.061	.39 / .46	.728	.561	.051	.110	.58	40	11.91	1.47	106.0	24.1	77	1.74	2.96
Aug. 31–Sept. 6	.3	12.62	70.9	900	1.025	8.81	7.12	.45	.046	.163	.648	.064	.32 / .38	.650	.525	.041	.083	.60	40	11.87	1.19	107.3	21.9	79	1.54	2.48
Sept. 7–13	.3	13.10	71.7	900	1.024	9.06	7.34	.52	.029	.203	.649	.039	.28 / .32	.613	.503	.049	.066	.64	46	11.84	1.40	129.0	25.5	79	1.68	3.09
Sept. 14–20	.3	13.15	71.2	1,170	1.022	10.00	8.22	.51	.053	.172	.655	.091	.31 / .46	.698	.574	.044	.080	.69	38	12.57	1.44	104.5	25.1	75	1.61	2.96
Sept. 21–30	0	12.63	70.8	1,196	1.020	10.01	8.30	.47	.053	.156	.652	.038	.33 / .37	.712	.574	.052	.087	.67	33	12.78	1.30	74.2	20.1	72	1.29	2.76
Oct. 1–7	.6	12.66	70.5	1,280	1.020	10.19	8.41	.55	.051	.164	.664	.061	.29 / .35	.681	.556	.054	.071	.70	43	11.54	1.50	71.9	18.8	72	1.27	1.97
Oct. 8–14	1.0	11.93	70.1	1,406	1.019	10.19	8.37	.55	.037	.166	.671	.085	.32 / .41	.701	.591	.049	.066	.71	36	12.97	1.56	95.3	22.9	75	1.53	2.57
Oct. 15–21	2.0	11.83	69.9	1,261	1.021	9.92	7.88	.48	.026	.177	.648	.221	.35 / .57	.702	.576	.039	.087	.69	32	13.17	1.33	85.7	22.8	73	1.52	2.31
Oct. 22–28	4.0	11.29	69.4	1,091	1.021	9.49	7.42	.51	.037	.164	.646	.392	.32 / .71	.672	.546	.042	.085	.68	28	10.71	1.38	61.6	16.9	73	1.07	1.85
Oct. 29–Nov. 7	0	13.08	70.3	1,211	1.020	9.38	7.67	.47	.024	.168	.617	.170	.22 / .39	.691	.551	.053	.086	.69	35	12.87	1.62	108.8	23.6	77	1.51	2.17

[a] With and without consideration of hippuric acid-nitrogen.

Average daily composition of urine and feces, with nitrogen intake for each of the seventeen periods of the experiment—Continued.

SUBJECT, E. C. M.

Date.	Daily dose benzoate.	Daily intake of nitrogen.	Body weight.	URINE.																		FECES.				
				Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.[a]	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	*Gms.*	*Gms.*	*Kilos.*	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*P. ct.*	*Gms.*	*Gms.*
July 6-12	0	15.69	67.0	982	1.023	12.46	10.32	0.57	0.056	0.204	0.554	0.066	0.74 / .70	0.908	0.766	0.058	0.092	0.93	26	14.31	2.43	142.8	35.0	73	1.75	5.40
July 13-19	0	12.36	67.5	874	1.021	10.27	8.50	.54	.038	.200	.568	......	.42	.783	.595	.053	.136	.77	11	12.50	1.82	158.6	34.5	76	1.82	4.09
July 20-26	.3	15.15	68.0	1,088	1.023	11.15	9.40	.51	.027	.209	.570	.018	.11 / .43	.876	.667	.051	.158	.86	16	14.07	2.39	211.7	35.8	80	2.16	5.44
July 27-Aug. 2	.3	10.98	67.6	881	1.022	9.49	7.84	.51	.040	.181	.564	......	.36	.735	.536	.050	.149	.73	46	11.03	1.93	170.4	23.5	84	1.38	3.12
Aug. 3-9	.3	13.02	67.8	1,188	1.019	9.55	7.95	.48	.051	.181	.558	......	.35	.770	.563	.047	.160	.68	16	14.26	1.79	162.0	30.7	80	1.84	3.50
Aug. 10-16	.3	13.36	68.0	1,130	1.020	9.94	8.41	.42	.031	.200	.577	.060	.23 / .32	.777	.567	.053	.156	.75	12	14.52	1.86	107.0	26.5	78	1.53	3.62
Aug. 17-23	.3	12.42	68.3	1,139	1.020	9.51	7.84	.40	.030	.193	.575	......	.48	.745	.547	.040	.157	.69	10	14.74	1.71	137.0	25.7	81	1.67	3.53
Aug. 24-30	.3	13.51	68.5	1,259	1.019	9.40	7.76	.41	.031	.198	.560	.070	.29 / .45	.710	.531	.043	.137	.71	14	14.27	1.69	160.1	29.1	81	1.93	3.86
Aug. 31-Sept. 6	.3	12.73	68.7	1,406	1.019	9.72	8.11	.40	.019	.205	.573	.071	.43	.668	.522	.036	.110	.69	10	15.19	1.60	166.2	26.4	84	1.77	2.96
Sept. 7-13	.3	11.68	68.6	974	1.023	9.57	8.14	.41	.027	.198	.577	.037	.19 / .23	.673	.534	.041	.100	.72	11	12.90	1.68	134.3	23.5	80	1.58	2.74
Sept. 14-20	.3	12.13	68.2	1,077	1.022	10.08	8.41	.47	.023	.211	.590	.089	.30 / .39	.684	.544	.041	.099	.74	11	14.19	1.75	99.2	19.2	79	1.17	2.14
Sept. 21-30	0	12.28	68.0	1,036	1.022	9.83	8.24	.45	.038	.187	.598	.054	.27 / .33	.702	.564	.039	.099	.73	8	13.87	1.70	112.4	21.4	78	1.33	2.08
Oct. 1-7	.6	12.24	68.1	957	1.023	9.68	7.96	.52	.024	.197	.617	.050	.31 / .36	.632	.541	.038	.054	.70	14	13.81	1.76	100.0	23.0	77	1.53	3.17
Oct. 8-14	1.0	12.30	68.0	1,023	1.023	9.34	7.63	.49	.024	.192	.614	.090	.30 / .39	.634	.520	.037	.075	.69	10	15.29	1.78	119.1	22.3	78	1.41	2.89
Oct. 15-21	2.0	11.77	67.6	1,021	1.022	9.59	7.70	.48	.016	.205	.592	.154	.46 / .61	.647	.523	.033	.090	.66	T.	15.48	1.65	120.2	19.0	78	1.22	2.47
Oct. 22-28	4.0	12.22	67.3	981	1.022	9.13	7.24	.49	.025	.184	.569	.361	.27 / .63	.634	.512	.035	.085	.67	9	14.48	1.68	117.9	24.2	77	1.67	3.72
Oct. 29-Nov. 7	0	12.88	67.2	939	1.023	9.62	7.98	.48	.017	.205	.584	.150	.27 / .42	.704	.552	.045	.107	.73	12	13.96	2.01	106.7	22.9	78	1.46	3.88

[a] With and without consideration of hippuric acid-nitrogen.

Average daily composition of urine and feces, with nitrogen intake for each of the seventeen periods of the experiment—Continued.

SUBJECT, W. C. R.

Date.	Daily dose benzoate.	Daily intake of nitrogen.	Body weight.	Urine.																		Feces.				
				Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.[a]	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Total acidity as oxalic acid.	Weight. Moist.	Weight. Air dry.	Water.	Total nitrogen.	Ether extract.
1908.	Gms.	Gms.	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.	Gms.	Gms.	Gms.	P. ct.	Gms.	Gms.
July 6-12	0	12.80	52.8	1,636	1.014	9.93	8.16	0.51	0.085	0.153	0.458	0.054	0.36 .46	0.768	0.619	0.044	0.123	0.72	24	12.42	1.52	111.4	31.2	70	1.78	3.49
July 13-19	0	10.32	53.2	1,381	1.017	8.70	7.17	.47	.057	.142	.463	......	.41	.658	.489	.040	.128	.64	T.	11.17	1.42	106.6	27.9	73	1.63	2.89
July 20-26	.3	11.54	53.3	1,175	1.020	8.35	6.88	.46	.045	.150	.466	.025	.28 .48	.684	.489	.043	.153	.61	T.	11.24	1.45	79.9	18.5	75	1.30	1.97
July 27-Aug. 2	.3	10.48	53.0	929	1.021	7.31	6.11	.33	.039	.160	.478	......	.21	.589	.396	.035	.159	.57	T.	10.80	1.17	82.6	17.7	77	1.23	1.90
Aug. 3-9	.3	10.74	52.7	999	1.020	7.98	6.61	.34	.057	.160	.486	......	.34	.637	.425	.038	.173	.58	T.	11.39	1.18	90.3	19.1	76	1.30	1.78
Aug. 10-16	.3	10.06	52.5	1,034	1.020	8.42	7.15	.33	.044	.153	.488	.050	.20 .28	.609	.429	.039	.141	.56	10	11.11	1.30	78.7	16.6	77	1.09	2.28
Aug. 17-23	.3	11.08	53.2	1,403	1.016	7.95	6.64	.28	.047	.163	.501	......	.34	.618	.434	.043	.140	.61	11	12.51	1.28	90.9	20.8	75	1.48	2.35
Aug. 24-30	.3	11.74	53.2	1,504	1.016	8.74	7.50	.30	.036	.158	.483	.057	.25 .26	.634	.480	.033	.123	.61	T.	12.63	1.37	101.6	26.4	76	1.59	2.77
Aug. 31-Sept. 6	.3	10.70	53.8	1,360	1.017	7.84	6.62	.27	.037	.148	.490	.086	.23 .26	.555	.419	.036	.099	.61	9	11.49	1.12	78.5	16.9	77	1.23	1.79
Sept. 7-13	.3	11.55	54.1	1,336	1.018	8.13	6.94	.30	.034	.157	.495	.055	.16 .21	.567	.436	.039	.092	.69	12	13.00	1.34	101.0	22.6	75	1.52	2.44
Sept. 14-20	.3	11.90	54.1	1,419	1.017	8.76	7.44	.36	.043	.155	.496	.092	.18 .27	.585	.470	.037	.077	.67	11	12.66	1.44	102.5	19.0	78	1.31	2.47
Sept. 21-30	0	11.18	54.0	1,466	1.016	8.58	7.30	.35	.042	.147	.500	.048	.21 .26	.606	.477	.037	.086	.69	T.	11.95	1.24	83.8	16.8	78	1.24	1.97
Oct. 1-7	.6	11.91	53.9	1,521	1.015	9.30	7.86	.41	.044	.158	.526	.032	.26 .29	.649	.522	.035	.092	.69	T.	13.70	1.45	89.3	18.7	77	1.38	2.20
Oct. 8-14	1.0	11.51	54.1	1,496	1.017	8.74	7.34	.38	.034	.146	.515	.081	.25 .33	.595	.477	.037	.081	.67	T.	13.69	1.30	115.8	19.6	81	1.35	2.18
Oct. 15-21	2.0	11.19	53.9	1,597	1.015	8.28	6.78	.38	.029	.157	.515	.187	.24 .43	.589	.460	.031	.102	.65	T.	15.26	1.33	79.4	16.3	78	1.17	1.63
Oct. 22-28	4.0	10.87	53.7	1,640	1.014	9.06	7.40	.40	.035	.160	.493	.378	.19 .57	.630	.501	.032	.096	.68	T.	11.49	1.46	71.8	17.0	74	1.18	2.19
Oct. 29-Nov. 7	0	11.29	53.1	1,519	1.015	9.21	7.70	.40	.017	.171	.508	.130	.30 .45	.654	.508	.044	.101	.66	11	13.20	1.73	93.4	18.8	78	1.31	1.40

[a] With and without consideration of hippuric acid-nitrogen.

DISTRIBUTION OF NITROGEN AND SULPHUR IN THE URINE.

Percentages of total nitrogen and total sulphur.

Subject H. H. G.

FORE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen. a	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6	85.3	3.9	0.7	0.9	3.7	....	5.3	81.5	2.2	16.2
July 7	85.7	3.4	.6	1.2	3.9	0.1	5.1 5.3	....	....	....
July 8	87.2	3.1	.6	1.1	3.6	.1	3.8 4.0	82.6	7.7	9.6
July 9	85.0	3.9	.4	1.1	3.3	1.0	5.1 6.1	83.1	4.9	12.0
July 10	84.0	3.9	.3	1.2	3.0	.6	6.8 7.2	80.9	4.5	14.6
July 11	86.9	4.2	.7	.8	3.7	....	3.6	90.4	4.2	5.3
July 12	85.3	4.0	.3	1.6	3.6	....	4.9	84.8	3.1	12.0
Average	85.4	3.8	.5	1.1	3.5	.4	5.2 5.3	83.8	4.4	11.3
July 13	86.2	5.8	.5	1.2	4.1	....	2.1	81.9	7.5	10.5
July 14	83.7	5.2	.5	1.4	4.3	....	4.5	73.5	6.4	20.0
July 15	85.7	3.6	.6	1.2	4.2	....	4.5	76.3	7.8	15.8
July 16	85.7	3.9	.3	1.5	4.2	....	4.3	75.6	8.3	16.1
July 17	83.5	4.0	.2	1.9	4.2	....	6.2	77.0	4.6	18.2
July 18	87.8	3.4	.5	1.7	4.9	....	1.6	70.5	7.5	22.0
July 19	82.1	4.2	.8	1.4	5.2	....	6.3	66.2	4.6	29.1
Average	85.0	4.3	.5	1.6	4.4	....	4.2	74.6	6.7	18.7

FIRST BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen. a	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 20	83.3	3.6	0.5	1.3	4.6	....	5.6	70.6	8.0	21.2
July 21	85.2	3.8	.4	1.2	3.9	....	5.4	74.4	8.1	17.4
July 22	83.2	4.1	.5	1.5	5.1	0.3	4.9 5.2	75.4	6.4	18.1
July 23	85.0	3.9	.5	1.4	4.7	.3	4.0 4.3	84.4	7.6	8.0
July 24	82.6	4.1	.3	1.6	5.2	....	5.9	75.3	6.6	18.1
July 25	84.3	4.6	.3	1.4	4.5	....	4.8	....	....	....
July 26	85.0	4.3	.3	1.6	4.9	....	3.8	74.4	5.3	20.1
Average	84.2	4.0	.4	1.4	4.7	.3	4.5 5.0	75.7	7.0	17.1
July 27	84.0	4.2	.3	1.6	4.9	....	5.0	75.0	6.5	18.5
July 28	86.2	4.8	.2	1.5	5.1	....	2.1	68.5	8.3	23.2
July 29	85.9	3.1	.3	1.4	4.5	....	4.6	75.4	8.2	16.4
July 30	85.2	4.1	.3	1.3	4.4	....	4.7	73.8	5.9	20.1
July 31	82.8	3.9	.2	1.7	5.1	....	6.2	72.8	6.8	20.4
August 1	84.5	4.4	.4	1.4	4.5	....	4.7	71.3	9.5	19.2
August 2	85.6	4.9	.3	1.4	4.8	....	2.8	70.2	8.2	21.6
Average	84.8	4.2	.3	1.5	4.8	....	4.4	72.4	7.5	19.9
August 3	78.4	4.9	1.1	1.2	5.5	....	8.8	71.0	7.7	21.3
August 4	84.9	3.3	.5	2.0	5.5	....	3.7	68.4	8.0	23.6
August 5	82.6	5.0	.6	1.3	5.5	....	4.9	72.0	8.3	19.7
August 6	82.1	4.6	.4	1.6	5.5	....	5.7	71.4	6.5	22.1
August 7	80.8	4.5	.2	2.0	5.6	....	6.8	76.9	6.9	16.2
August 8	82.7	4.2	.6	1.7	6.3	....	4.5	70.8	7.4	21.8
August 9	82.7	5.2	.7	1.2	5.2	....	4.7	73.9	8.1	17.9
Average	82.0	4.4	.6	1.4	5.5	....	5.6	72.1	7.5	20.4
August 10	82.3	4.7	....	1.3	5.7	.2	....	76.7	9.1	14.2
August 11	87.2	3.2	....	1.1	4.6	.4	....	73.8	7.3	18.9
August 12	85.8	3.4	.08	1.2	5.5	....	3.7	70.8	4.8	24.4
August 13	83.5	4.5	.7	1.5	6.5	....	3.2	70.3	7.0	22.7
August 14	85.6	2.8	.2	1.9	4.7	....	4.7	76.4	5.4	18.2
August 15	85.6	2.9	.3	1.7	4.9	....	4.3	71.3	7.5	21.2
August 16	80.0	6.6	.8	2.0	5.3	....	5.1	68.6	9.0	22.4
Average	84.5	3.9	.4	1.6	5.3	.3	4.1	72.6	7.2	20.2

a With and without reference to hippuric acid-nitrogen.

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject H. H. G.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
August 17	84.8	3.1	0.4	1.9	4.9	....	4.7	75.0	9.8	14.9
August 18	82.2	3.2	.3	1.8	6.0	....	6.3	67.3	8.2	24.5
August 19	84.1	3.1	.5	1.5	5.8	....	4.8	71.8	12.7	15.4
August 20	84.3	3.0	.6	1.2	5.4	....	5.1	73.1	6.4	20.5
August 21	85.6	2.6	.3	1.7	5.2	....	4.6	74.0	7.2	18.8
August 22	83.6	2.7	.4	1.6	5.6	....	6.0	75.9	6.7	17.5
August 23	84.6	3.7	.4	1.6	4.8	....	4.7	71.4	5.1	23.5
Average	84.2	3.1	.4	1.6	5.4	....	5.2	72.6	8.1	19.2
August 24	84.6	4.2	.3	1.6	5.2	0.1	4.9 5.0	73.5	7.6	18.8
August 25	84.8	4.3	.3	1.6	5.4	.5	3.0 3.6	73.6	7.3	19.1
August 26	85.3	3.3	.4	1.5	5.0	.9	2.8 3.7	74.2	8.2	17.6
August 27	83.8	3.9	.4	1.7	5.4	.8	3.7 4.5	71.4	8.6	20.0
August 28	84.4	3.5	.3	1.8	6.1	....	3.8	[illegible]	....	....
August 29	84.0	2.2	.3	1.8	6.0	....	5.5	74.9	15.1	9.9
August 30	78.7	5.6	.8	1.3	6.2	....	7.0	76.8	8.7	14.5
Average	83.7	3.9	.4	1.6	5.5	.5	3.6 4.7	75.1	8.1	16.6
August 31	84.2	4.4	.6	1.3	6.1	.5	2.8 3.4	84.4	7.9	7.7
September 1	87.0	3.4	....	1.4	5.3	.5	....	71.4	9.2	19.4
September 2	79.6	4.4	.4	1.5	5.6	.5	7.4 7.9	73.7	5.3	20.9
September 3	79.2	4.8	.6	1.6	6.0	.6	7.1 7.8	67.6	8.4	24.0
September 4	83.4	4.6	.4	2.0	6.7	....	2.9	....	....	....
September 5	80.0	4.0	.5	1.7	6.4	....	7.2	85.3	10.2	4.4
September 6	80.8	4.2	.7	1.5	4.8	....	7.7	76.8	6.6	16.4
Average	82.2	4.2	.5	1.6	5.8	.5	5.7 6.1	76.1	8.0	15.5
September 7	85.6	3.3	.6	1.9	5.6	.4	2.4 2.7	83.2	10.6	6.1
Setpember 8	84.5	3.5	.5	2.0	6.4	.4	2.4 2.8	68.7	8.4	22.9
September 9	85.0	5.2	.6	1.5	6.4	.4	1.9 1.3	73.5	5.5	20.9
September 10	82.6	4.3	.5	1.7	6.5	.4	3.8 4.1	79.2	7.4	13.4
September 11	86.4	4.1	.3	1.6	5.2	.3	1.7 2.0	79.3	7.7	12.8
September 12	85.5	4.0	.5	1.6	5.2	.3	2.6 2.9	74.5	18.9	6.5
September 13	82.3	5.2	.3	1.6	5.0	.3	5.0 5.4	....	....	....
Average	84.5	4.2	.5	1.7	5.7	.4	2.7 3.0	76.4	9.7	13.7
September 14	83.9	5.0	.5	1.7	4.7	.7	3.2 3.9	81.3	8.6	10.0
September 15	82.8	4.8	.4	2.0	5.5	.8	3.5 4.3	73.6	8.9	17.5
September 16	81.5	5.5	.6	1.8	6.2	.8	3.3 4.2	75.6	8.3	15.9
September 17	81.7	4.5	.5	1.7	6.2	.8	4.4 5.2	69.9	8.0	21.9
September 18	83.2	4.4	.3	1.6	5.1	.8	4.5 5.3	82.7	9.2	7.9
September 19	82.4	4.3	.6	1.4	5.6	.8	4.7 5.5	79.5	7.3	13.1
September 20	81.0	4.8	.6	1.4	5.2	.8	6.0 6.8	79.9	5.8	15.2
Average	82.5	4.7	.5	1.7	5.5	.8	4.2 5.1	75.9	8.2	14.7

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject H. H. G.—Continued.

FIRST AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 21	82.6	4.6	0.4	1.4	6.4	0.4	4.0 4.5	80.4	6.9	12.6
September 22	87.0	3.2	.5	1.6	5.7	.4	1.4 1.9	76.8	6.4	16.7
September 23	85.6	4.4	.6	1.4	5.2	.4	2.0 2.5	79.1	9.1	11.8
September 24	83.8	4.5	.4	1.6	5.4	.4	3.7 4.1	77.6	7.7	14.6
September 25	81.8	5.0	.3	1.7	5.8	.4	4.8 5.2	76.8	8.4	14.8
September 26	82.6	3.9	.6	1.8	6.0	.4	4.5 4.9	76.1	10.5	13.3
September 27	84.8	4.5	.9	1.1	5.3	.4	2.8 3.2	83.2	7.8	8.6
September 28	84.6	3.5	.6	1.5	5.8	.4	3.4 3.9	76.4	7.6	15.9
September 29	85.0	2.6	.5	1.7	5.3	.4	4.3 4.8	75.3	11.1	13.5
September 30	84.2	3.9	.4	1.5	5.8	.4	3.7 4.2	81.0	6.0	13.0
Average	84.3	4.1	.5	1.5	5.7	.4	3.5 3.9	78.2	8.1	13.6
SECOND BENZOATE PERIOD.										
October 1	84.5	4.2	0.6	1.5	5.7	0.7	2.6 3.2	80.0	8.1	11.8
October 2	83.8	5.5	.5	1.5	6.0	.7	2.0 2.2	81.5	10.4	7.4
October 3	82.1	4.1	.6	1.5	5.3	.7	5.6 6.2	80.3	8.1	11.6
October 4	82.4	5.0	.3	1.7	5.3	.7	4.5 5.2	78.4	5.6	16.0
October 5	81.5	5.4	.5	1.6	5.7	.7	4.3 5.0	85.2	8.3	6.5
October 6	81.7	3.5	.4	1.9	5.9	.7	5.7 6.4	80.6	7.5	11.9
October 7	82.0	4.3	.5	1.7	5.8	7	4.7 5.5	76.8	11.7	11.2
Average	82.4	4.5	.5	1.6	5.7	.7	4.4 5.1	80.3	8.5	10.9
October 8	82.6	4.8	.6	1.4	5.5	.7	4.3 5.1	79.8	8.7	11.0
October 9	83.9	4.4	.6	1.5	5.2	.7	3.4 4.2	83.6	7.7	8.6
October 10	83.4	4.5	.6	1.7	6.3	.8	2.4 3.3	84.6	8.1	7.3
October 11	82.8	5.2	.3	1.8	6.3	.8	2.6 3.5	84.3	6.5	9.2
October 12	83.6	5.1	.3	1.7	6.2	.7	2.3 3.1	77.4	8.2	14.4
October 13	81.3	5.2	.2	1.7	5.3	.7	5.4 6.2	75.6	8.5	15.9
October 14	80.3	5.0	.2	1.7	5.8	.7	6.1 6.9	74.1	8.9	17.0
Average	82.6	4.9	.4	1.6	5.8	.7	3.9 4.7	79.7	8.0	12.2
October 15	78.6	5.5	.5	1.8	6.1	2.2	4.4 6.5	78.3	9.1	12.6
October 16	83.5	3.8	.2	1.6	5.9	2.0	2.5 4.6	89.9	9.0	10.9
October 17	81.7	4.3	.2	1.8	5.2	1.9	4.6 6.5	78.8	7.2	14.0
October 18	84.3	3.4	.1	1.6	4.9	1.7	3.6 5.3	79.1	4.4	16.5
October 19	82.3	4.1	.4	1.6	5.3	1.8	4.3 6.2	76.5	10.2	13.2

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject H. H. G.—Continued.

SECOND BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 20	81.0	4.2	0.2	1.6	5.5	1.9	5.4 7.4	73.1	10.9	15.9
October 21	81.0	4.4	.2	1.9	6.1	2.0	4.3 6.4	72.6	6.7	20.7
Average	82.0	4.2	.2	1.7	5.6	1.9	4.2 6.1	76.7	8.2	15.1
October 22	79.2	5.5	.3	1.3	5.4	2.9	5.4 8.3	73.4	9.8	16.8
October 23	80.5	5.5	.4	1.2	5.4	2.9	3.9 6.9	77.2	8.7	14.1
October 24	79.2	4.0	.5	1.6	6.1	3.0	5.5 8.5	53.7	....	11.8
October 25	79.3	4.5	.2	1.4	5.0	2.9	6.4 9.3	72.5	6.4	21.0
October 26	79.6	4.5	.5	1.4	5.4	2.9	5.5 8.5	73.0	9.0	18.0
October 27	79.4	3.3	.4	1.3	5.3	2.8	7.3 10.2	73.4	7.4	17.2
October 28	78.8	5.0	.3	1.3	4.9	2.8	6.7 9.5	79.6	7.5	13.0
Average	79.3	4.6	.4	1.4	5.4	2.9	5.8 8.7	72.1	8.1	16.1

FINAL AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 29	81.7	4.9	0.1	1.6	5.6	2.1	3.9 6.0	79.3	7.0	13.7
October 30	82.9	4.4	.2	1.6	5.6	2.1	2.9 5.0	80.5	8.7	10.8
October 31	84.4	3.9	....	1.8	5.3	1.7	....	77.6	8.0	14.0
November 1	83.9	2.9	.2	1.5	4.9	1.8	4.5 6.4	79.2	6.7	14.1
November 2	86.8	3.4	.4	1.5	5.6	2.1	.1 2.2	76.3	9.0	14.6
November 3	82.3	4.3	.2	1.5	5.8	2.0	3.5 5.5	78.6	9.0	12.4
November 4	83.8	3.9	.2	1.4	4.9	1.6	3.9 5.6	81.1	6.5	12.4
November 5	84.1	4.2	.1	1.5	5.0	1.7	3.1 4.8	80.7	8.7	10.4
November 6	84.6	4.1	.2	1.4	4.6	1.6	3.3 4.9	80.1	9.3	10.6
November 7	86.2	3.7	.4	1.5	4.7	1.6	1.9 3.5	77.1	10.8	12.0
Average	84.1	3.9	.2	1.5	5.1	1.8	3.0 4.8	79.0	8.4	12.5

Subject W. W. H.

FORE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6	84.6	3.7	0.5	1.4	4.2	....	5.4	83.5	9.6	6.8
July 7	86.3	3.0	.6	1.2	3.7	0.1	4.8 4.9	....	....	....
July 8	86.3	3.8	.4	1.5	3.6	.05	4.0 4.1	86.0	7.4	6.5
July 9	85.7	3.4	....	1.9	3.7	.7	....	88.2	6.0	5.8
July 10	83.1	4.3	.1	1.7	3.7	.7	6.1 6.8	86.5	6.3	7.2
July 11	87.0	3.3	.3	1.4	3.7	....	4.1	83.1	6.1	10.8
July 12	86.3	2.8	.1	1.7	4.4	....	4.5	84.6	3.0	12.3
Average	85.6	3.5	.3	1.6	3.9	.4	4.8 4.8	85.3	6.4	8.2

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject W. W. H.—Continued.

FORE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 13	86.5	5.4	0.3	1.3	4.4	....	1.7	88.2	9.0	2.9
July 14	85.2	4.2	.1	1.7	4.3	....	4.3	81.4	6.6	12.0
July 15	86.2	2.0	.1	1.6	4.3	....	5.6	78.6	5.4	18.9
July 16	86.7	3.1	.05	1.6	4.5	....	3.8	89.8	6.4	3.7
July 17	85.2	3.8	.04	1.7	4.2	....	4.9	....	....	....
July 18	87.2	5.3	.2	1.8	4.6	....	.7	71.8	6.9	21.2
July 19	84.2	4.2	.3	2.1	5.9	....	3.1	74.3	8.4	17.3
Average	86.0	3.9	.2	1.7	4.5	....	3.5	80.7	7.1	12.2

FIRST BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 20	86.8	4.1	0.3	1.9	5.1	....	1.6	76.0	4.3	19.5
July 21	85.1	4.1	....	1.7	4.4	....	....	74.8	6.0	19.2
July 22	88.5	3.4	.2	2.0	5.2	0.2	.2 .4	78.2	7.0	14.7
July 23	86.2	3.8	.07	1.8	5.1	.2	2.6 2.7	81.4	5.1	13.4
July 24	86.0	3.6	....	2.1	5.9	....	....	78.7	5.8	15.5
July 25	86.1	3.3	.02	1.7	4.6	....	4.2	78.1	6.0	15.8
July 26	84.3	2.7	.06	1.8	5.3	....	5.8	71.2	2.8	26.0
Average	86.1	3.6	.13	1.8	5.1	.2	3.0	76.8	5.3	17.8
July 27	84.0	3.1	.1	1.8	5.2	....	5.7	74.3	4.2	21.5
July 28	82.9	4.6	.1	2.0	5.8	....	4.4	69.3	6.5	24.6
July 29	84.3	3.5	.02	2.0	5.8	....	4.2	77.6	4.4	17.9
July 30	86.8	3.4	.1	1.9	5.5	....	2.2	79.1	5.3	15.6
July 31	83.6	3.5	.02	2.1	6.1	....	4.7	72.2	6.4	21.4
August 1	85.5	4.6	.02	2.1	5.6	....	2.0	71.1	7.2	21.7
August 2	87.1	3.4	.03	1.9	5.4	....	2.0	76.8	5.7	17.4
Average	84.9	3.8	.06	2.0	5.5	....	3.5	74.1	5.6	17.4
August 3	84.1	4.3	.3	2.1	5.8	....	3.4	68.2	7.1	24.7
August 4	84.8	3.6	.2	2.1	6.5	....	2.7	62.2	5.3	32.5
August 5	82.3	5.3	.4	1.5	5.6	....	4.7	69.4	7.3	23.3
August 6	87.4	3.4	....	1.9	5.1	....	....	79.0	4.3	16.7
August 7	87.4	2.8	....	2.2	5.1	....	....	82.7	6.0	11.3
August 8	88.9	3.0	.1	2.0	5.6	....	.2	77.3	8.4	14.3
August 9	87.2	2.8	.1	1.9	4.9	....	3.0	74.9	6.0	19.1
Average	86.1	3.6	.2	1.9	5.5	....	2.7	73.6	6.3	20.0
August 10	86.6	3.3	.1	1.6	4.4	.5	3.1 3.7	78.2	6.6	15.2
August 11	88.6	2.3	.2	1.6	4.8	.5	1.7 2.2	72.4	6.6	20.8
August 12	87.3	3.0	.2	1.8	5.2	....	2.5	72.6	6.1	21.2
August 13	83.8	3.9	.1	2.0	6.2	....	3.7	68.6	9.0	22.3
August 14	87.2	2.5	.06	2.2	5.1	....	2.9	83.6	6.6	10.7
August 15	85.2	3.5	.2	2.0	5.8	....	3.1	83.2	8.8	7.9
August 16	85.3	3.0	.2	1.8	5.5	....	4.1	75.6	5.8	18.5
Average	86.4	3.0	.1	1.8	5.2	.5	2.4 3.2	76.0	7.0	17.0
August 17	85.4	2.2	.3	1.9	5.5	....	4.3	72.1	7.2	20.6
August 18	83.3	3.1	.4	1.9	6.4	....	4.8	69.6	8.0	22.4
August 19	84.2	3.5	.4	2.1	6.8	....	2.8	71.7	13.1	15.2
August 20	84.6	2.8	.2	2.2	6.0	....	4.0	72.2	9.4	18.3
August 21	85.4	2.6	.1	2.2	6.0	....	3.7	81.7	7.0	11.2
August 22	82.4	2.9	.3	2.0	6.2	....	6.0	69.1	7.7	23.1
August 23	85.1	2.6	.5	2.1	6.1	....	3.3	75.6	4.8	19.5
Average	84.3	2.7	.3	2.1	6.1	....	4.2	73.1	8.3	18.4
August 24	82.8	3.7	.2	2.1	6.2	.1	4.8 5.0	78.7	7.3	13.8
August 25	85.6	3.1	.4	2.1	6.8	.4	1.7 2.1	80.6	5.5	13.7
August 26	85.3	3.5	.02	1.8	5.4	.8	3.0 3.9	79.8	7.2	13.0

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject W. W. H.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
August 27	86.2	3.2	0.2	2.0	6.1	0.7	1.4 2.1	78.6	5.8	15.6
August 28	86.8	1.7	....	2.2	6.2	....	....	71.5	10.5	18.0
August 29	79.8	3.5	.1	2.5	7.4	....	6.4	79.3	13.5	7.3
August 30	76.0	7.6	.6	2.1	7.4	....	6.0	80.0	5.7	14.4
Average	83.4	3.7	.3	2.1	6.4	.5	2.7 4.2	78.2	7.9	13.8
August 31	80.4	4.3	.5	1.9	8.4	1.1	3.4 4.4	84.3	6.8	8.8
September 1	85.3	3.4	....	1.9	6.0	.8	....	81.0	6.2	12.8
September 2	....	2.7	.2	2.3	6.5	.8	....	82.0	5.6	12.3
September 3	82.1	4.0	.02	2.0	5.9	.8	4.9 5.8	79.7	6.7	13.5
September 4	85.4	3.2	.2	2.1	6.5	....	2.9	79.8	5.3	14.8
September 5	....	4.4	.4	1.9	7.3	....	....	82.4	7.6	9.9
September 6	83.4	3.4	.2	2.5	5.7	....	4.6	84.2	4.8	11.0
Average	83.3	3.6	.3	2.1	6.6	.9	4.1 4.4	81.7	6.0	12.1
September 7	83.4	4.3	.2	2.3	7.1	.5	1.9 2.5	86.6	6.9	6.4
September 8	85.9	3.2	.1	2.5	6.9	.6	.6 1.2	80.2	7.6	12.4
September 9	84.3	4.1	.2	2.1	7.2	.4	1.5 2.0	79.0	5.4	15.6
September 10	84.8	3.3	.1	2.1	6.3	.4	2.9 3.3	77.7	7.9	14.3
September 11	84.1	4.8	.2	2.1	7.1	.5	1.1 1.6	84.4	7.6	7.8
September 12	84.0	3.9	.1	2.2	6.2	.4	2.9 3.4	84.4	10.4	5.1
September 13	85.2	3.9	.2	2.1	5.2	.4	2.8 3.3	....	....	....
Average	84.4	3.9	.2	2.2	6.5	.4	2.0 2.5	82.0	7.6	10.2
September 14	87.6	4.1	.04	2.0	4.9	.3	2.0 2.3	83.8	7.4	8.8
September 15	85.1	4.2	....	2.2	5.6	.3	....	79.6	11.3	9.1
September 16	83.7	3.3	.1	2.2	5.5	.3	4.7 5.1	76.8	7.3	15.7
September 17	84.2	3.9	.08	2.1	6.0	.3	3.4 3.8	80.1	6.5	13.4
September 18	85.4	3.3	.1	1.9	5.0	.3	4.0 4.3	81.8	5.6	12.4
September 19	84.8	3.1	.1	1.8	5.6	.3	4.9 5.3	82.7	7.2	10.0
September 20	85.2	4.4	.1	1.9	6.0	.3	1.9 2.2	82.0	4.2	13.8
Average	84.8	3.7	.1	2.0	5.5	.3	3.5 3.8	81.0	7.0	11.9

FIRST AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 21	86.8	3.3	0.1	1.9	6.1	0.2	1.1 1.3	85.3	5.5	9.2
September 22	87.2	3.0	.2	2.0	6.1	.2	1.1 1.3	81.2	7.7	11.1
September 23	86.7	4.4	.1	1.6	5.0	.2	1.8 2.0	81.2	6.8	12.0
September 24	85.3	3.8	.2	2.0	6.5	.2	1.6 1.8	84.0	6.0	10.0
September 25	85.7	4.4	.05	2.1	5.7	.2	2.0 2.2	86.7	7.7	5.5
September 26	82.7	3.6	.3	2.2	6.6	.2	4.0 4.3	82.6	7.9	9.4

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject W. W. H.—Continued.

FIRST AFTER PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 27	83.7	5.0	0.	1.7	6.0	0.2	2.8 3.0	80.9	7.6	11.6
September 28	83.9	3.8	.3	1.8	6.2	.2	3.4 3.7	83.0	8.4	8.6
September 29	83.7	3.2	.2	2.2	7.4	.3	2.7 3.0	79.2	10.6	10.2
September 30	84.1	3.5	.2	2.0	6.3	.3	3.6 3.9	79.3	6.2	14.3
Average	85.0	3.8	.2	2.0	6.1	.2	2.2 2.5	82.1	7.3	10.1
SECOND BENZOATE PERIOD.										
October 1	82.8	4.5	0.1	2.0	6.7	0.6	3.1 3.7	81.5	7.9	10.4
October 2	85.4	3.4	.1	2.2	5.9	.5	1.8 2.4	86.0	8.1	5.8
October 3	84.4	5.1	....	2.1	5.9	.5	....	81.6	6.4	12.0
October 4	84.6	4.2	.07	2.5	5.9	.5	1.9 2.5	77.6	5.1	17.3
October 5	84.6	4.1	.2	2.0	6.1	.6	2.2 2.8	85.5	6.4	8.1
October 6	83.7	4.3	.1	1.9	5.8	.5	3.4 4.0	85.9	7.0	7.1
October 7	86.2	3.6	.03	2.2	6.3	.5	.9 1.5	82.1	11.6	6.2
Average	84.6	4.1	.1	2.1	6.1	.5	2.2 2.8	82.9	7.4	9.4
October 8	84.7	3.9	.2	1.8	6.0	.8	2.3 3.2	84.2	8.3	7.5
October 9	83.1	3.6	.06	2.7	6.4	.8	3.3 4.2	85.6	6.3	8.0
October 10	85.7	3.5	....	2.5	7.2	.8	....	83.6	6.0	10.3
October 11	81.6	3.5	.2	2.6	7.2	.8	4.0 4.8	85.5	6.4	8.1
October 12	85.9	4.6	.2	1.9	6.1	.7	.4 1.1	84.6	7.7	7.7
October 13	83.4	4.2	.1	1.8	5.7	.7	3.8 4.6	83.0	8.8	8.2
October 14	83.1	3.9	.2	2.0	6.0	.7	4.1 4.9	83.8	6.4	9.8
Average	83.8	3.9	.2	2.2	6.4	.8	3.0 3.9	84.2	7.1	8.6
October 15	81.9	4.1	.05	2.3	5.9	1.7	3.9 5.7	82.7	5.5	11.7
October 16	83.8	3.4	.03	1.8	5.5	1.6	3.6 5.3	84.3	7.8	7.9
October 17	84.4	3.7	....	2.4	5.9	1.8	....	85.2	7.1	7.7
October 18	79.8	3.6	.2	2.2	5.8	1.7	6.5 8.2	84.3	3.5	12.2
October 19	85.5	3.1	.1	1.9	5.8	1.7	1.7 3.4	82.0	7.0	10.9
October 20	85.7	3.2	....	1.9	5.8	1.6	....	80.9	7.1	11.9
October 21	84.0	2.8	....	2.3	5.8	1.7	....	81.8	3.8	14.4
Average	83.7	3.4	.1	2.1	5.8	1.7	4.0 5.7	82.9	5.9	11.1
October 22	81.6	4.1	....	1.7	5.6	2.4	....	79.6	7.1	13.3
October 23	83.7	4.6	.1	1.5	5.4	2.4	2.4 4.7	80.2	7.6	12.2
October 24	80.2	3.1	.1	2.0	6.1	2.5	6.0 8.5	88.3	8.4	3.2
October 25	74.2	4.6	.2	2.2	6.1	2.8	10.7 13.6	87.6	4.7	7.6

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject W. W. H.—Continued.

SECOND BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 26	79.2	4.7	0.1	1.9	5.6	2.5	5.8 8.3	78.5	8.4	13.1
October 27	82.7	3.0	.1	2.2	5.6	2.6	3.6 6.2	77.0	7.4	15.5
October 28	79.3	5.0	.02	1.8	5.8	2.7	5.1 7.9	79.5	7.6	12.9
Average	80.0	4.1	.1	1.9	5.7	2.6	5.4 8.2	81.0	7.4	11.5

FINAL AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 29	83.8	4.0	0.1	2.0	6.2	2.3	1.3 3.7	77.9	8.9	13.2
October 30	82.5	3.2	....	2.1	5.8	2.2	....	79.3	8.5	12.3
October 31	82.3	3.4	....	2.3	6.4	2.0	....	81.2	7.0	11.8
November 1	85.4	4.7	.04	2.1	5.9	2.3	0.0 2.3	83.0	6.7	10.3
November 2	87.2	3.2	....	2.1	6.6	2.3	....	86.0	7.4	6.6
November 3	83.3	3.1	.04	2.3	6.3	2.1	2.7 4.9	76.1	10.1	13.8
November 4	84.8	4.2	....	2.1	5.2	1.9	....	81.2	6.2	12.4
November 5	81.7	4.8	.1	1.9	6.2	2.2	2.7 4.9	83.5	8.9	7.5
November 6	83.6	2.8	....	1.9	5.4	1.8	....	88.0	6.6	5.4
November 7	81.5	3.3	.05	2.2	5.7	2.0	5.2 7.3	80.3	7.9	11.8
Average	83.6	3.7	.06	2.1	5.8	1.9	2.4 4.4	81.7	7.8	10.5

Subject L. M. L.

FORE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6	82.9	5.0	0.6	1.2	4.2	....	6.6	82.3	2.6	5.1
July 7	82.5	3.7	.4	1.5	5.3	0.1	6.1 6.3	....	....	....
July 8	86.5	3.6	.3	1.6	5.4	.05	2.4 2.4	84.0	5.9	10.1
July 9	83.2	4.3	.4	1.6	5.2	.6	4.5 5.2	88.0	4.8	7.0
July 10	81.6	5.0	.4	.4	1.6	.8	5.2 5.8	85.2	6.5	8.3
July 11	84.1	3.8	.5	1.3	4.7	....	5.3	80.8	9.9	9.2
July 12	83.0	5.1	.5	2.3	5.3	....	3.6	91.7	7.2	1.9
Average	83.4	4.2	.4	1.6	5.2	.4	4.8 5.1	85.3	6.1	8.6
July 13	86.4	4.4	.4	1.7	4.9	....	2.0	84.8	5.4	9.7
July 14	83.4	4.2	.4	1.7	5.0	....	5.2	78.8	7.1	14.0
July 15	86.0	2.3	.3	1.6	5.3	....	4.3	78.4	5.4	16.1
July 16	86.2	3.5	.3	1.6	5.5	....	2.6	76.6	7.8	15.5
July 17	84.7	3.6	.2	2.0	5.9	....	3.4	79.3	6.1	14.5
July 18	82.3	4.4	.7	1.7	6.4	....	4.4	74.8	9.1	16.1
July 19	81.7	5.4	.4	1.7	5.9	....	4.7	....	....	....
Average	84.6	3.9	.4	1.7	5.5	....	3.7	79.0	6.8	14.2

FIRST BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 20	84.3	3.9	0.3	1.6	5.1	....	4.5	77.8	3.8	18.4
July 21	83.8	4.2	.2	1.6	5.3	....	4.6	76.3	4.8	18.8
July 22	87.2	3.5	.6	1.6	5.2	0.2	1.2 1.5	78.2	5.8	16.0
July 23	85.1	3.8	.3	1.5	5.4	.2	3.0 3.2	82.4	5.4	12.1

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject L. M. L.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 24	85.9	3.8	0.2	1.8	5.3	....	3.4	77.9	4.4	17.6
July 25	83.9	4.3	.15	1.8	4.7	....	4.3	78.3	6.0	15.5
July 26	82.4	5.6	.2	2.2	5.0	....	4.6	75.8	4.5	19.5
Average	84.6	4.1	.3	1.7	5.1	0.2	2.1 3.7	78.2	4.9	16.8
July 27	85.6	4.4	.1	2.1	4.9	....	2.8	78.0	3.4	18.1
July 28	82.7	5.5	.2	2.3	6.6	....	2.6	75.3	6.2	18.5
July 29	83.2	4.6	.4	2.2	6.2	....	3.3	76.7	5.3	17.9
July 30	82.1	4.7	.3	2.0	6.4	....	4.4	78.4	3.6	17.9
July 31	82.4	4.3	.3	2.2	7.0	....	3.7	76.2	5.6	18.2
August 1	85.3	4.2	.4	2.3	6.4	....	1.4	70.0	7.9	22.1
August 2	81.7	4.9	.3	1.8	6.2	....	4.7	76.7	4.7	18.6
Average	83.4	4.7	.3	2.1	6.2	....	3.1	76.1	5.3	18.6
August 3	80.9	4.8	.4	2.1	5.7	....	5.9	70.5	5.8	24.5
August 4	82.7	3.9	.3	2.2	6.5	....	4.2	69.3	6.2	24.3
August 5	80.2	4.6	.2	2.2	6.3	....	6.2	70.8	5.7	23.5
August 6	82.3	3.8	....	2.0	6.2	....	....	71.6	5.6	22.7
August 7	80.2	3.7	.3	2.3	7.0	....	6.5	74.5	9.0	16.5
August 8	84.7	4.0	.3	1.9	6.1	....	2.7	69.1	8.1	22.8
August 9	83.2	4.6	.5	1.9	6.6	....	3.1	77.5	4.6	17.7
Average	82.2	4.3	.3	2.0	6.4	....	4.7	71.8	6.3	21.8
August 10	83.3	4.1	.2	2.1	5.7	.7	3.7 4.5	75.6	6.4	18.0
August 11	87.3	2.9	.3	1.8	5.7	.8	1.1 2.0	69.7	6.7	23.6
August 12	83.4	4.2	.5	1.8	6.3	....	3.6	75.6	5.3	19.0
August 13	81.9	3.5	.2	2.2	6.7	....	5.4	71.6	7.0	21.3
August 14	85.9	3.2	.7	1.7	6.6	....	1.4	78.9	5.9	15.0
August 15	85.3	4.7	.9	2.1	7.4	....	.0	67.5	7.9	24.5
August 16	79.1	5.4	.4	1.9	7.1	....	6.1	73.2	2.8	24.0
Average	83.7	4.0	.4	1.9	6.5	.7	2.4 3.3	73.1	6.1	20.8
August 17	80.9	3.9	.4	2.8	7.5	....	4.4	67.0	5.8	27.1
August 18	79.2	3.3	.2	2.4	7.9	....	7.0	67.2	6.3	26.4
August 19	84.1	3.4	.4	2.2	8.2	....	2.0	69.2	6.9	23.9
August 20	84.6	3.4	.1	2.0	7.1	....	2.7	....	....	....
August 21	80.4	3.4	.3	2.4	7.1	....	6.4	77.4	6.2	16.3
August 22	83.6	2.9	.4	2.0	6.7	....	4.1	77.1	9.2	13.7
August 23	81.7	4.0	.7	2.0	6.8	....	4.5	74.4	4.0	21.5
Average	82.1	3.5	.3	2.3	7.2	....	4.5	71.7	6.4	21.5
August 24	83.3	3.2	.2	2.2	6.1	.9	3.9 4.8	78.6	4.7	16.7
August 25	83.1	3.6	.4	2.0	6.3	.5	3.9 4.4	75.5	4.7	19.7
August 26	85.5	2.8	.2	1.8	5.8	.2	3.6 3.8	74.9	7.5	16.4
August 27	83.2	2.7	.3	2.1	6.5	.7	4.2 5.0	74.1	6.3	19.6
August 28	84.7	2.8	.2	2.1	7.1	....	3.1	75.6	10.8	13.5
August 29	79.7	3.8	.5	2.9	7.1	....	5.7	75.3	8.9	15.8
August 30	77.6	5.9	.7	2.2	7.2	....	6.4	76.7	11.7	12.6
Average	82.7	3.5	.3	2.2	5.6	.6	4.0 4.7	76.0	7.4	16.6
August 31	79.9	4.7	.3	2.6	8.2	.6	3.7 4.3	80.6	6.1	13.2
September 1	82.8	3.7	....	2.0	6.8	.6	....	74.4	6.9	18.7
September 2	83.2	4.0	.2	2.0	6.6	.5	3.2 3.8	82.3	4.0	13.6
September 3	82.3	4.3	.2	2.1	6.7	.6	3.7 4.3	82.1	7.4	10.3

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject L. M. L.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 4	84.2	4.0	0.3	2.1	6.5	....	2.7	79.5	4.5	15.9
September 5	84.6	3.7	.5	2.0	7.1	....	1.9	79.2	8.3	12.7
September 6	82.3	3.9	.5	1.9	6.4	....	4.6	73.4	6.1	20.4
Average	82.7	4.0	.3	2.1	5.9	0.6	3.5 3.6	78.8	6.1	15.1
September 7	82.7	3.5	.3	2.4	7.3	.4	3.1 3.5	81.6	6.8	11.6
September 8	84.3	2.8	.3	2.2	6.5	.3	3.2 3.6	79.7	7.0	13.3
September 9	84.7	3.6	.2	2.0	6.4	.4	2.6 3.0	79.4	4.5	16.1
September 10	86.8	2.9	.3	1.8	6.7	.3	.9 1.3	78.5	8.6	12.9
September 11	83.8	5.1	.5	2.8	7.0	.4	.2 .6	85.3	6.6	8.1
September 12	83.4	4.1	.3	2.3	6.0	.3	3.4 3.8	85.2	7.1	7.6
September 13	85.1	4.0	.3	2.2	5.7	.3	2.4 2.7	80.6	6.5	12.9
Average	84.4	3.7	.3	2.2	6.5	.3	2.6 2.9	81.5	6.6	11.9
September 14	81.7	4.0	.3	2.2	6.2	1.0	4.6 5.6	82.6	6.8	10.5
September 15	83.7	4.9	.3	1.8	5.9	1.0	1.9 2.9	82.1	6.8	11.0
September 16	84.5	3.3	.2	2.2	6.2	1.0	2.4 3.4	80.4	8.0	11.6
September 17	85.2	3.7	.3	1.8	6.2	1.0	1.5 2.5	79.1	7.3	13.6
September 18	85.3	2.4	.3	1.9	5.7	.9	3.1 4.1	80.4	6.0	13.6
September 19	84.7	3.2	.2	1.9	5.8	1.0	3.0 4.0	81.8	8.0	10.2
September 20	81.5	3.8	.7	1.7	6.5	1.1	4.5 5.6	81.3	6.4	12.3
Average	83.8	3.6	.3	1.9	6.1	1.0	3.0 4.0	81.1	7.1	11.8

FIRST AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 21	86.3	3.2	0.4	1.9	6.6	0.3	1.3 1.6	85.4	6.7	7.8
September 22	87.0	2.6	.4	2.1	6.7	.2	.7 1.0	84.2	7.1	8.7
September 23	84.6	4.3	.3	2.0	6.5	.3	1.6 2.0	81.4	6.8	11.6
September 24	84.3	4.1	.3	2.0	6.3	.2	2.5 2.8	81.5	6.4	12.0
September 25	84.4	3.7	.2	2.0	6.1	.2	3.3 3.6	81.9	7.4	11.6
September 26	83.0	4.1	.4	2.0	6.2	.2	4.0 4.3	77.9	7.9	14.2
September 27	83.7	4.3	.6	1.6	6.5	.3	2.7 3.0	81.6	7.0	11.3
September 28	83.7	3.0	.4	1.8	6.3	.3	4.5 4.8	77.5	7.5	15.0
September 29	83.6	3.3	.5	1.7	6.8	.3	3.5 3.8	80.2	8.8	11.0
September 30	86.4	3.1	.2	1.9	6.3	.3	1.4 1.7	80.5	4.0	15.4
Average	84.7	3.6	.4	1.9	6.4	.2	2.6 2.8	81.3	6.9	11.6

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject L. M. L.—Continued.

SECOND BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 1	82.0	3.5	0.4	2.0	6.3	0.7	4.8 5.6	74.5	9.1	16.4
October 2	84.3	4.1	.4	2.1	6.0	.7	2.1 2.8	83.4	8.8	7.8
October 3	82.6	4.7	.4	1.9	6.0	.7	3.5 4.2	82.3	7.3	10.3
October 4	85.7	3.9	.4	1.9	6.2	.7	1.0 1.7	87.9	6.2	5.9
October 5	84.0	3.3	.4	1.9	6.1	.7	3.5 4.2	85.1	6.2	8.7
October 6	82.4	3.5	.4	2.1	6.3	.7	4.4 5.1	86.4	6.6	7.0
October 7	82.3	5.2	.6	2.4	6.8	.7	1.8 2.6	82.1	11.9	6.0
Average	83.4	4.1	.4	2.0	6.2	.7	3.0 3.7	83.2	8.1	8.8
October 8	82.6	5.5	.6	2.5	6.8	1.1	.8 1.9	83.4	8.4	8.2
October 9	81.6	4.0	.4	2.0	7.0	1.1	3.7 4.8	84.2	7.7	8.1
October 10	82.1	3.9	.2	2.2	7.0	1.0	3.3 4.4	81.3	7.8	10.9
October 11	82.2	4.3	.2	2.1	7.0	1.0	3.1 4.2	83.2	6.7	10.1
October 12	83.3	4.8	.4	2.0	6.5	1.0	1.9 2.9	81.8	8.2	9.9
October 13	82.8	3.6	.1	2.3	5.7	1.0	4.4 5.4	83.3	7.5	9.2
October 14	82.6	4.8	.2	1.9	5.6	.9	3.8 4.7	83.0	6.0	11.0
Average	82.6	4.4	.3	2.1	6.5	1.0	2.8 3.9	82.8	7.4	9.7
October 15	80.2	5.8	.3	2.9	6.2	1.7	3.0 4.7	76.6	6.8	16.5
October 16	80.7	5.3	.3	2.1	6.4	1.8	3.2 5.1	79.4	8.6	12.0
October 17	82.0	4.4	.3	2.3	6.5	1.9	2.5 4.4	79.6	8.0	12.4
October 18	80.7	3.8	.2	2.8	7.4	2.0	2.6 4.7	81.2	4.6	14.2
October 19	81.1	3.9	.3	1.9	6.8	1.8	4.1 5.9	78.0	6.7	15.2
October 20	82.3	3.9	.4	2.3	6.7	1.7	2.4 4.2	77.7	6.8	15.3
October 21	84.2	3.8	.3	2.1	6.4	1.7	1.4 3.1	78.8	5.0	16.1
Average	81.7	4.4	.3	2.3	6.6	1.8	2.8 4.6	78.7	6.6	14.5
October 22	81.3	4.5	.1	2.0	6.1	3.8	2.1 5.9	79.6	7.0	13.2
October 23	81.3	5.0	.4	1.6	6.1	3.9	2.3 6.2	79.3	9.6	10.6
October 24	80.3	3.7	.4	1.9	6.1	3.8	3.6 7.5	82.2	9.0	8.7
October 25	79.8	4.8	.2	2.1	6.8	4.5	1.5 6.0	77.9	5.8	16.2
October 26	77.4	4.3	.3	2.0	6.9	4.6	4.2 8.8	76.9	8.7	14.4
October 27	78.4	3.0	.3	2.3	6.9	4.2	4.7 9.0	73.2	7.0	19.8
October 28	79.8	4.8	.1	1.9	6.7	4.5	2.0 6.5	79.0	7.5	13.4
Average	79.6	4.2	.2	2.0	6.5	4.1	2.9 7.1	78.4	7.9	13.6

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject L. M. L.—Continued.

FINAL AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 29	83.4	4.1	0.2	1.8	6.3	02.1	1.6 3.7	76.2	7.9	15.9
October 30	85.2	4.0	.1	2.1	6.3	2.1	.02 2.1	75.6	8.5	15.9
October 31	84.3	3.1	.1	2.3	6.2	1.8	2.1 4.0	73.4	8.4	18.2
November 1	82.4	4.5	.2	2.1	6.9	2.2	1.5 3.7	75.0	6.3	18.7
November 2	87.7	2.9	.1	2.0	6.6	2.0	.0 2.0	80.8	8.0	11.1
November 3	82.9	3.3	.2	2.1	7.2	2.2	1.8 4.0	81.2	8.1	10.7
November 4	83.8	4.0	.1	1.8	5.7	1.8	2.8 4.6	79.8	5.6	14.5
November 5	85.1	3.7	.1	1.9	5.5	1.7	1.8 3.5	78.7	7.4	13.9
November 6	85.6	3.4	.04	1.9	5.6	1.7	1.4 3.1	80.5	7.1	12.4
November 7	82.0	3.3	.1	1.9	5.2	1.6	5.3 7.0	78.7	8.3	13.0
Average	84.4	3.6	.1	2.0	6.1	1.9	1.9 3.8	78.0	7.5	14.4

Subject J. F. L.

FORE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6	80.4	7.0	0.9	1.4	5.8	....	4.3	89.4	4.8	5.8
July 7	79.7	5.6	.8	1.6	6.8	0.3	5.1 5.4	....	....	....
July 8	82.0	4.4	1.0	1.7	6.0	.06	5.0 5.0	86.3	8.1	5.5
July 9	81.1	5.0	.8	1.4	5.1	.3	5.8 6.2	80.1	8.1	11.8
July 10	81.3	5.6	.4	1.5	5.0	.9	5.0 5.9	82.5	7.2	10.2
July 11	81.3	6.9	.7	1.5	5.9	....	3.6	86.3	7.5	6.2
July 12	78.0	6.8	.9	1.6	6.5	....	6.1	81.8	3.7	14.5
Average	80.5	5.9	.8	1.5	5.9	.4	5.0 4.9	84.4	6.5	9.0
July 13	80.7	5.6	.4	1.9	6.2	....	4.9	84.5	7.7	7.8
July 14	80.7	5.9	.5	1.8	5.9	....	5.4	77.3	10.0	12.7
July 15	82.4	4.0	.3	1.7	5.8	....	5.7	71.3	8.2	20.5
July 16	84.8	5.1	.4	1.6	6.1	....	2.0	71.3	7.7	21.0
July 17	78.7	5.1	.2	1.7	5.8	....	7.6	76.6	5.9	17.5
July 18	79.5	7.0	.7	1.7	7.5	....	3.5	69.4	8.6	21.9
July 19	75.3	9.1	.7	1.5	7.6	....	5.7	69.7	7.1	23.2
Average	80.4	5.9	.4	1.7	6.3	....	5.0	74.0	7.8	18.2

FIRST BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 20	73.5	7.6	0.5	2.1	7.8	....	8.4	70.6	7.8	21.5
July 21	77.8	6.5	.3	1.5	6.3	....	7.4	70.8	8.3	20.9
July 22	75.2	5.3	.4	2.0	6.4	0.3	9.3 9.5	73.6	7.8	17.9
July 23	77.2	6.8	.8	1.5	7.9	.2	5.1 5.4	77.4	4.4	18.2
July 24	80.9	6.0	.3	2.1	8.0	....	2.6	74.3	6.7	18.9
July 25	84.8	5.1	.3	1.8	6.5	....	1.4	76.6	7.3	15.5
July 26	80.0	7.2	.4	2.0	6.5	....	3.8	72.7	7.8	19.5
Average	78.6	6.3	.4	1.9	7.0	.2	7.2 5.5	73.8	7.4	18.8
July 27	74.8	6.4	.6	2.1	8.3	....	4.9	70.1	7.0	22.9
July 28	80.8	5.5	.8	1.6	6.9	....	4.2	68.3	7.9	23.8
July 29	82.9	3.9	.4	1.8	6.7	....	4.0	73.7	8.1	18.5
July 30	78.4	7.6	.8	1.4	7.8	....	3.9	74.4	6.2	19.2

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject J. F. L.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 31	80.3	6.6	0.6	1.7	7.7	....	3.1	72.7	7.6	19.6
August 1	79.4	5.1	.6	1.6	6.3	....	6.9	68.9	8.5	22.5
August 2	80.4	6.2	.6	2.0	7.1	....	3.4	77.4	7.3	15.2
Average	79.6	5.8	.6	1.7	7.2	....	4.8	72.4	7.5	20.1
August 3	76.4	7.9	.9	1.9	7.4	....	5.2	78.4	8.1	13.4
August 4	81.2	4.0	1.0	1.6	6.9	....	5.1	69.7	7.3	22.8
August 5	78.6	6.6	.7	1.6	7.7	....	4.8	71.0	6.7	22.3
August 6	77.2	6.4	.7	1.5	7.8	....	6.1	72.3	7.0	20.7
August 7	78.9	4.9	.4	2.1	6.7	....	6.7	75.4	6.5	18.0
August 8	77.1	6.9	.7	1.7	7.6	....	6.0	71.5	5.8	22.7
August 9	80.8	7.0	.7	1.5	6.5	....	3.3	75.4	6.0	18.6
Average	78.4	6.2	.7	1.7	7.2	....	5.3	73.4	6.8	19.8
August 10	78.3	6.3	.7	1.8	7.2	0.8	4.8 5.6	75.3	6.7	17.9
August 11	84.4	4.0	.6	1.6	6.0	.6	2.7 3.3	70.8	9.1	20.1
August 12	80.3	6.0	.6	2.0	7.8	....	3.8	70.5	7.8	21.6
August 13	77.1	6.6	.6	1.9	8.3	....	5.3	70.6	7.9	21.5
August 14	81.2	5.2	.3	2.1	7.5	....	3.5	80.8	6.4	12.6
August 15	81.7	5.4	.5	1.6	7.0	....	3.7	72.7	7.6	19.5
August 16	79.3	7.0	.9	1.5	6.8	....	4.3	64.3	19.1	16.6
Average	80.6	5.8	.6	1.8	7.2	.7	4.0 4.0	72.2	9.1	18.7
August 17	78.7	5.4	.5	2.0	6.9	....	6.3	70.6	10.4	19.0
August 18	77.4	5.2	.6	2.4	8.5	....	5.9	73.2	7.1	19.7
August 19	79.7	4.7	.6	2.0	7.6	....	5.3	70.4	7.1	22.5
August 20	80.8	4.3	....	1.7	6.2	....	....	76.5	7.1	16.4
August 21	79.7	4.3	.3	2.0	7.5	....	5.9	84.3	7.0	8.7
August 22	80.6	3.9	.5	1.8	6.6	....	6.5	73.8	8.5	17.6
August 23	79.8	7.4	1.1	1.9	6.7	....	2.9	76.3	5.2	18.5
Average	80.0	5.1	.6	2.0	5.9	....	5.5	76.4	7.6	15.8
August 24	79.2	5.9	.5	2.3	7.2	.1	4.6 4.7	79.2	4.0	16.8
August 25	81.6	4.7	.6	1.7	6.2	.8	4.2 5.0	77.4	7.1	15.5
August 26	86.1	4.6	.3	1.6	5.0	.8	1.6 2.4	80.8	4.8	14.4
August 27	80.7	5.0	.5	1.7	6.4	.5	5.0 5.5	76.0	5.7	18.3
August 28	80.7	5.0	.4	2.2	8.2	....	3.4	77.0	9.2	13.8
August 29	77.0	5.7	.7	1.9	6.9	....	7.6	75.6	10.9	13.4
August 30	76.0	7.2	.5	2.1	7.9	....	6.2	75.1	8.2	16.6
Average	80.6	5.4	.5	1.9	6.7	.5	4.0 4.3	77.1	7.0	15.1
August 31	75.6	6.0	.6	2.0	9.5	.8	5.3 6.1	81.2	5.1	13.7
September 1	82.8	4.7	.5	1.6	7.4	.7	2.1 2.8	80.2	7.3	12.5
September 2	82.5	3.8	.4	1.7	6.2	.6	4.5 5.1	77.3	6.1	16.6
September 3	83.4	4.7	.4	1.8	6.6	.6	2.2 2.9	78.8	6.2	14.8
September 4	80.2	5.9	.4	2.2	7.6	....	3.7	77.8	3.4	18.7
September 5	79.1	5.9	.7	2.1	8.9	....	3.1	87.6	8.2	4.1
September 6	80.8	5.1	.5	1.4	6.1	....	5.7	84.5	8.7	6.8
Average	80.6	5.1	.5	1.8	7.2	.7	3.5 4.3	80.8	6.3	12.7
September 7	81.7	6.1	.05	1.8	7.1	.4	2.6 3.1	83.4	8.6	8.0
September 8	82.0	4.6	.3	2.3	7.5	.4	2.5 2.9	....	....	....
September 9	78.8	6.8	.4	1.9	8.5	.5	2.9 3.4	80.5	5.8	13.7

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject J. F. L.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 10	81.0	5.7	0.5	1.8	7.9	0.4	2.6 3.0	76.8	9.0	14.2
September 11	81.6	6.3	.3	2.9	6.8	.4	1.7 2.1	81.5	7.5	10.0
September 12	77.5	7.1	.1	2.4	6.8	.4	5.7 6.1	83.6	9.7	6.7
September 13	83.9	3.9	.4	2.1	5.8	.3	3.2 3.6	84.1	5.6	10.3
Average	80.8	5.7	.3	2.2	7.1	.4	3.0 3.5	81.6	7.7	10.4
September 14	82.4	5.9	.5	1.9	6.8	1.0	1.4 2.4	82.3	6.2	11.5
September 15	81.8	5.9	.5	1.6	6.6	.9	2.4 3.3	82.7	7.6	9.5
September 16	82.5	4.2	.4	1.8	6.3	.8	3.8 4.6	81.2	6.2	12.6
September 17	80.0	5.6	.5	1.6	7.5	1.0	3.6 4.6	81.5	6.2	12.3
September 18	84.0	3.5	.4	1.8	5.6	.8	3.5 4.3	84.2	5.8	10.0
September 19	83.7	4.7	.7	1.3	5.7	.8	2.5 3.3	83.6	6.9	9.5
September 20	79.5	6.1	.5	1.8	7.2	1.1	3.8 4.9	80.3	4.9	14.7
Average	82.2	5.1	.5	1.7	6.5	.9	3.1 4.0	82.3	6.3	11.4

FIRST AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 21	84.2	4.2	0.4	1.5	6.3	0.3	2.9 3.2	79.6	5.1	15.3
September 22	84.7	3.1	.7	1.5	6.2	.3	3.4 3.8	80.2	5.2	14.5
September 23	84.7	5.2	.6	1.3	5.7	.3	1.9 2.2	76.3	8.0	15.6
September 24	83.6	5.1	.4	1.3	6.2	.3	3.0 3.3	80.6	6.7	12.6
September 25	82.4	5.4	.2	1.7	6.4	.3	3.3 3.6	82.5	7.5	10.0
September 26	79.7	3.7	.7	1.8	8.0	.4	5.4 5.8	83.2	7.8	9.0
September 27	81.8	4.9	.6	1.4	6.2	.3	4.5 4.8	82.1	7.2	10.6
September 28	81.6	5.5	.6	1.4	6.5	.4	3.8 4.2	80.7	7.9	11.3
September 29	81.3	5.2	.6	1.5	6.9	.4	4.0 4.4	79.8	8.7	11.5
September 30	85.0	4.5	.2	1.7	6.9	.4	1.0 1.4	82.2	8.7	9.0
Average	83.0	4.7	.5	1.6	6.5	.3	3.3 3.7	80.5	7.3	12.2

SECOND BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 1	83.4	5.1	0.4	1.6	6.5	0.6	2.1 2.7	80.3	8.4	11.3
October 2	82.7	5.3	.4	1.7	6.5	.6	2.4 3.0	84.2	5.1	10.6
October 3	83.5	5.1	.4	1.7	6.2	.6	2.3 2.9	80.0	8.3	11.6
October 4	81.2	5.7	.5	1.7	7.0	.6	3.2 3.8	79.6	6.3	14.1
October 5	79.7	7.1	.7	1.3	7.1	.6	3.1 3.8	83.8	7.6	8.6

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject J. F. L.—Continued.

SECOND BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 6	83.5	3.8	0.4	1.6	6.0	0.5	4.2 4.7	79.5	12.1	8.4
October 7	83.4	5.6	.5	1.3	6.2	.6	2.3 2.9	83.7	7.9	8.3
Average	82.6	5.4	.5	1.6	6.5	.6	2.8 3.4	81.7	7.9	10.4
October 8	83.7	4.9	.6	1.6	6.8	.9	1.5 2.4	83.5	7.4	9.1
October 9	81.6	5.4	.4	1.3	6.6	.8	3.6 4.5	84.5	7.8	7.6
October 10	81.8	5.1	.3	1.8	7.2	.9	2.7 3.7	84.7	6.1	9.1
October 11	82.7	4.9	.4	1.7	7.2	.8	1.8 2.7	85.8	3.8	10.3
October 12	84.5	5.2	.2	1.4	5.5	.7	2.0 2.7	83.6	7.2	9.2
October 13	78.0	7.4	.2	1.3	6.5	.8	5.4 6.3	86.4	6.7	6.9
October 14	81.2	4.6	.1	1.9	6.2	.8	4.8 5.7	81.8	4.8	13.3
Average	82.3	5.4	.3	1.6	6.5	.8	3.1 3.9	84.3	6.2	9.4
October 15	78.7	6.1	.2	1.9	6.7	2.3	3.9 6.2	81.5	5.9	12.6
October 16	79.6	4.6	.2	1.7	6.2	2.1	5.4 7.6	81.6	5.1	13.2
October 17	77.3	5.4	.3	2.0	8.0	2.8	3.9 6.7	82.6	7.1	10.2
October 18	81.8	3.9	.4	1.7	6.9	2.2	2.8 5.0	87.5	4.7	7.7
October 19	84.0	4.1	.2	1.5	5.3	1.8	3.2 5.0	83.5	5.1	11.4
October 20	82.7	5.2	.2	1.5	6.1	2.1	2.1 4.2	78.7	6.2	14.9
October 21	81.1	4.4	.2	1.9	6.8	2.3	3.1 5.5	78.7	4.9	16.3
Average	80.7	4.8	.2	1.7	6.5	2.2	3.5 5.7	82.1	5.5	12.3
October 22	78.3	6.3	.1	1.7	7.1	4.1	2.2 6.3	82.6	7.0	10.4
October 23	78.4	5.7	.3	1.5	6.2	3.8	4.0 7.8	85.0	5.7	9.3
October 24	76.8	4.7	.6	2.1	8.2	4.7	2.5 7.3	81.5	8.7	9.8
October 25	78.0	4.9	.5	1.7	6.7	4.2	3.8 8.0	84.1	4.2	11.7
October 26	77.6	6.0	.6	1.5	7.0	4.2	3.0 7.2	81.6	7.5	10.8
October 27	81.3	3.3	.3	1.7	5.9	3.5	3.8 7.3	76.7	5.0	18.3
October 28	76.4	6.5	.2	1.6	6.8	4.3	4.0 8.3	78.7	5.0	16.2
Average	78.3	5.3	.4	1.7	6.8	4.1	3.3 7.4	81.3	6.2	12.5

FINAL AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 29	80.2	6.5	0.5	1.5	7.3	1.9	2.1 4.0	79.7	8.2	11.9
October 30	79.9	5.2	.1	1.8	6.7	1.8	4.1 5.9	78.0	5.8	16.1
October 31	80.7	5.7	.1	2.0	7.8	1.9	1.7 3.6	74.8	9.2	15.9
November 1	81.5	4.2	.3	1.8	7.6	2.0	2.4 4.4	79.0	6.6	14.3

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject J. F. L.—Continued.

FINAL AFTER PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
November 2	80.0	5.0	0.2	1.8	6.5	1.8	4.5 6.3	81.1	8.4	10.5
November 3	82.5	5.1	.3	1.7	6.9	1.7	1.5 3.3	84.2	6.2	9.6
November 4	83.4	4.8	.1	2.0	6.8	1.8	.8 2.6	79.6	5.8	14.6
November 5	81.2	5.8	.3	1.7	7.0	1.8	1.5 3.3	78.6	10.7	10.7
November 6	83.4	4.2	.2	1.7	7.0	1.7	1.4 3.1	81.9	7.9	10.2
November 7	84.7	3.7	.2	1.6	5.5	1.4	2.7 4.3	81.6	7.8	10.6
Average	82.0	5.0	.2	1.7	5.8	1.7	2.3 4.1	79.8	7.6	12.4

Subject E. C. M.

FORE PERIOD

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6	85.3	4.7	0.3	1.5	4.0	....	3.5	79.0	9.1	10.9
July 7	82.8	4.2	.5	1.6	4.7	0.2	5.9 6.1	....	....	....
July 8	82.6	3.8	.6	1.7	4.5	.08	6.5 6.6	83.6	6.9	9.4
July 9	82.6	4.9	.3	1.7	4.6	.8	5.1 5.9	85.1	6.6	8.3
July 10	80.7	5.7	.2	1.8	4.3	.9	6.4 7.2	86.0	.9	13.1
July 11	83.4	4.2	.6	1.3	4.0	....	6.4	81.9	7.3	11.8
July 12	83.0	4.3	.5	1.5	4.8	....	5.7	88.0	8.1	3.9
Average	82.8	4.5	.4	1.6	4.5	.5	6.0 5.5	83.9	8.1	9.6
July 13	85.7	5.4	.5	1.6	5.2	....	1.3	78.5	7.5	14.0
July 14	80.4	5.9	.4	2.1	5.3	....	5.7	80.4	8.6	10.5
July 15	84.2	3.6	.2	2.0	4.8	....	5.1	78.6	5.2	16.2
July 16	85.6	5.9	.4	1.5	4.9	....	1.4	76.6	7.3	16.1
July 17	80.7	6.0	.2	2.1	5.5	....	5.4	73.2	4.3	22.5
July 18	81.7	4.8	.5	2.0	6.6	....	4.1	71.3	7.3	21.4
July 19	80.9	4.9	.5	2.0	6.5	....	5.9	72.6	7.7	19.7
Average	82.7	5.2	.4	1.9	5.5	....	4.0	76.1	6.7	17.2

FIRST BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 20	81.3	3.9	0.3	2.1	4.9	....	6.5	75.6	5.5	18.8
July 21	82.4	5.1	.3	1.6	5.3	....	5.3	76.5	3.8	19.6
July 22	87.0	4.3	.3	2.0	5.3	0.1	.7 .8	75.2	6.4	18.4
July 23	86.3	4.8	.3	1.6	5.2	.2	1.1 1.2	78.6	6.4	15.0
July 24	81.8	5.0	.2	1.8	5.5	....	5.4	76.5	5.4	18.1
July 25	85.0	4.5	....	1.8	4.4	....	....	77.9	5.6	16.3
July 26	83.7	4.4	.1	1.9	5.1	....	4.4	72.4	7.2	20.4
Average	84.4	4.5	.2	1.8	5.1	.1	.9 3.8	76.2	5.8	18.0
July 27	79.5	5.2	.6	1.6	6.3	....	6.5	66.8	10.0	23.2
July 28	79.4	5.9	.6	1.5	6.5	....	5.8	72.6	8.6	18.5
July 29	86.1	4.1	.3	1.8	5.3	....	2.4	77.6	7.5	14.8
July 30	84.2	4.7	.3	1.8	5.6	....	3.1	73.9	5.4	20.7
July 31	84.1	5.1	.3	2.1	5.6	....	2.6	75.6	5.4	19.0
August 1	80.6	6.1	.2	2.4	5.9	....	4.6	71.6	5.8	22.6
August 2	83.5	6.2	.4	1.6	6.2	....	1.6	73.8	5.3	20.8
Average	82.6	5.3	.4	1.9	5.9	....	3.8	73.0	6.8	20.2

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject E. C. M.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
August 3	82.6	6.3	0.4	1.7	5.1		3.4	73.6	5.8	20.6
August 4	80.4	4.1		1.9	5.7			71.7	5.4	22.9
August 5	84.2	5.6	.6	1.6	5.7		2.1	72.8	5.7	21.4
August 6	83.9	5.3	.7	1.6	6.1		2.4	72.9	6.9	20.1
August 7	78.8	4.6	.3	2.2	6.2		7.3	77.2	7.0	15.8
August 8	82.7	4.6		2.4	6.3			69.3	6.7	24.0
August 9	84.7	4.4	.6	1.6	5.6		2.8	74.8	5.0	20.1
Average	83.3	5.0	.5	1.8	5.8		3.6	73.2	6.1	20.7
August 10	85.4	4.5	.4	1.7	4.9	0.5	2.1 2.6	75.4	6.3	18.3
August 11										
August 12	84.3	4.5	.4	1.7	5.6		3.4	70.4	6.4	23.2
August 13	82.6	4.6	.2	1.9	5.9		4.5	71.8	6.7	21.3
August 14	86.1	3.6		2.2	5.9			76.1	6.0	17.9
August 15	85.1	3.4	.04	2.3	6.3		2.8	72.4	7.3	20.2
August 16	84.4	4.4	.4	2.0	6.1		2.6	72.1	8.3	19.5
Average	84.5	4.2	.3	2.0	5.8	.5	2.1 3.2	73.0	6.8	20.1
August 17	82.1	4.3	.2	2.1	6.0		5.3	71.6	6.6	21.8
August 18	82.8	3.7	.5	1.9	6.5		4.3	68.8	6.5	24.6
August 19	81.4	3.6	.1	2.0	6.3		6.3	72.4	4.7	22.7
August 20	82.3	3.9	.1	2.2	5.8		5.5	73.8	4.0	22.1
August 21	82.6	4.2	.1	2.2	6.4		4.2	74.8	4.2	21.8
August 22	83.7	4.8	.4	1.9	5.9		3.2	75.2	6.0	18.7
August 23	81.7	4.3	.6	1.7	5.3		6.1	78.1	6.0	15.9
Average	82.4	4.2	.3	2.0	6.0		5.0	73.6	5.3	21.1
August 24	80.7	5.4	.5	1.9	6.4	.5	4.2 4.8	73.7	3.0	23.3
August 25	82.0	4.7	.4	2.0	6.0	.7	4.1 4.9	74.2	5.7	20.1
August 26	85.6	3.4	.1	2.2	5.3	1.0	1.0 2.2	74.8	4.1	21.1
August 27	84.6	3.8	.2	2.1	5.7	.4	2.9 3.3	76.2	4.8	18.9
August 28	83.5	3.4		2.3	6.2			73.3	8.2	18.3
August 29	80.7	4.6	.3	2.3	6.1		5.9	74.6	9.6	15.8
August 30	79.3	5.0	.4	1.9	5.6		7.2	76.2	6.9	16.9
Average	82.6	4.3	.3	2.1	5.9	.6	3.0 4.7	74.8	6.0	19.2
August 31	83.1	4.5	.2	2.0	6.3	.7	3.0 3.7	80.7	5.6	13.7
September 1	84.3	4.3		1.9	6.1	.7		72.6	5.5	21.9
September 2	83.0	4.0	.1	2.1	5.7	.7	4.0 4.7	77.4	4.9	17.7
September 3	85.7	4.1	.2	2.1	5.7	.7	1.2 2.0	77.6	4.9	17.4
September 4	84.0	3.9	.1	2.2	5.8		4.0	74.4	4.5	21.0
September 5	82.9	4.1	.1	2.3	5.7		4.8	87.7	7.2	4.9
September 6	81.6	3.7	.3	1.9	5.7		6.7	78.3	5.2	16.3
Average	83.5	4.1	.2	2.0	5.8	.7	2.7 4.4	78.2	5.4	16.4
September 7	83.4	5.4	.3	1.9	5.9	.4	2.5 2.9	81.0	5.5	13.5
September 8	85.4	3.1	.2	2.2	6.0	.3	2.7 3.1	77.7	5.8	16.4
September 9	85.8	4.5	.3	1.8	5.9	.3	1.2 1.6	76.7	5.0	18.1
September 10	85.1	3.6	.3	2.1	6.1	.3	2.1 2.5	80.2	5.8	14.0
September 11	86.5	4.3	.3	2.1	6.2	.4	.1 .5	82.2	6.0	11.8

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject E. C. M.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 12	86.1	3.8	0.1	2.1	6.2	0.3	1.1 1.5	81.9	8.2	9.9
September 13	83.6	4.7	.2	1.9	5.5	.3	3.4 3.8	76.5	5.4	18.0
Average	85.0	4.2	.2	2.0	6.0	.3	1.9 2.4	75.3	6.1	14.6
September 14	83.4	5.4	.1	2.1	5.6	.8	2.2 3.1	82.9	4.8	13.1
September 15	85.4	5.2	.1	2.1	5.8	.8	.9 1.7	81.5	5.7	12.8
September 16	83.8	4.6	.1	2.1	5.7	.8	2.6 3.5	78.2	6.1	15.7
September 17	83.5	4.2	.3	2.1	6.2	.8	2.8 3.7	79.0	5.4	15.5
September 18	84.8	3.5	.2	2.1	5.6	.8	2.6 3.5	78.7	5.3	16.0
September 19	81.7	4.4	.2	2.0	6.2	.9	4.6 5.5	75.5	7.9	16.5
September 20	81.6	4.8	.3	1.9	5.5	.9	4.9 5.8	83.2	6.1	10.7
Average	83.6	4.6	.2	2.1	5.8	.8	2.9 3.7	79.6	6.0	14.4
FIRST AFTER PERIOD.										
September 21	84.8	4.8	0.4	1.7	6.2	0.5	1.4 1.9	78.8	5.0	16.2
September 22	85.3	3.6	.5	1.9	6.3	.5	1.6 2.1	79.6	4.6	15.8
September 23	85.3	4.0	.2	2.0	5.5	.5	2.1 2.6	80.7	4.9	14.3
September 24	83.3	5.0	.4	1.7	6.2	.5	2.7 3.2	81.1	4.9	14.0
September 25	84.2	4.7	.1	2.0	5.6	.5	2.7 3.2	81.5	5.2	13.3
September 26	83.0	4.6	.6	1.7	6.6	.5	2.8 3.3	79.5	5.2	15.2
September 27	83.6	4.7	.4	1.6	5.8	.5	3.0 3.5	81.0	5.5	13.5
September 28	81.7	5.4	.2	1.9	6.0	.5	4.0 4.5	80.9	5.5	12.6
September 29	80.7	4.5	.3	1.8	6.6	.6	5.3 5.9	79.4	7.4	13.1
September 30	85.3	3.8	....	2.2	5.7	.5	....	81.4	6.1	12.5
Average	83.8	4.5	.3	1.9	6.1	.5	2.5 3.0	80.4	5.5	14.0
SECOND BENZOATE PERIOD.										
October 1	81.9	5.4	0.2	1.9	6.1	0.5	3.7 4.2	78.3	6.2	15.4
October 2	82.4	5.9	.2	2.1	5.9	.5	2.8 3.3	84.4	4.7	10.8
October 3	82.4	5.8	.2	2.1	6.1	.5	2.7 3.2	83.3	6.9	9.6
October 4	81.2	5.2	.1	2.2	6.7	.5	3.8 4.4	87.0	6.1	6.9
October 5	82.3	6.6	.4	1.7	6.5	.5	2.0 2.5	88.5	5.8	5.6
October 6	81.2	4.5	.3	1.9	6.7	.5	4.9 5.4	88.7	5.9	4.4
October 7	84.3	4.2	.1	2.1	6.4	.5	2.3 2.8	88.4	6.0	6.5
Average	82.3	5.3	.2	2.0	6.3	.5	3.2 3.7	85.5	6.0	8.5

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject E. C. M.—Continued.

SECOND BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 8	82.3	4.9	0.4	1.9	6.5	0.9	2.9 3.8	86.6	6.1	7.3
October 9	84.0	4.6	.1	2.0	5.8	.9	2.5 3.4	86.3	4.2	9.5
October 10	83.1	5.5	.1	2.2	6.8	.9	1.2 2.1	82.9	6.4	10.7
October 11	80.3	5.5	.4	1.9	7.0	1.0	3.7 4.7	82.9	6.6	10.4
October 12	80.3	6.3	.2	2.1	7.3	1.0	2.5 3.6	76.9	6.3	16.7
October 13	81.1	4.8	.2	1.8	6.4	.9	4.7 5.6	81.1	6.5	12.3
October 14	80.7	5.2	.2	2.0	6.2	.9	4.4 5.3	77.5	6.6	15.9
Average	81.7	5.2	.2	2.0	6.5	.9	3.2 4.1	82.1	5.8	11.9
October 15	79.0	4.5	.04	2.5	6.4	1.6	5.8 7.5	85.9	6.0	8.1
October 16	81.6	5.5	.2	1.8	5.9	1.6	3.2 4.8	82.8	4.3	12.9
October 17	79.4	6.6	....	2.3	7.4	1.9	....	80.3	6.7	13.0
October 18	....	4.3	.2	1.9	5.9	1.5	....	84.2	4.7	11.0
October 19	81.3	5.1	.2	2.0	6.0	1.5	3.8 5.3	78.7	5.9	15.4
October 20	81.1	4.2	.03	1.9	5.7	1.4	5.5 6.9	79.7	5.2	14.9
October 21	81.2	4.6	.1	2.3	6.0	1.5	5.0 6.5	76.3	3.1	20.6
Average	80.6	5.0	.1	2.1	6.2	1.6	4.6 6.2	80.7	5.2	13.9
October 22	78.0	7.0	....	2.1	6.4	3.9	....	79.4	6.4	14.2
October 23	78.3	6.8	.3	1.7	5.7	3.8	3.4 7.3	77.7	4.0	18.2
October 24	79.2	4.5	.3	2.1	6.4	3.7	3.6 7.4	86.7	9.2	3.9
October 25	80.7	4.8	.2	2.0	6.5	4.2	1.5 5.7	83.7	4.7	11.6
October 26	77.1	5.7	.2	2.1	6.4	4.1	4.3 8.4	82.7	4.1	13.2
October 27	82.3	3.1	.2	2.1	6.0	3.7	2.3 6.1	77.0	5.5	17.5
October 28	79.8	6.0	.2	1.6	5.9	3.9	2.3 6.2	80.8	4.9	14.3
Average	79.4	5.3	.2	2.0	6.2	3.9	3.2 7.0	80.7	5.6	13.6

FINAL AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 29	82.6	5.4	0.4	1.7	6.3	1.6	1.7 3.4	81.9	7.6	10.4
October 30	81.4	4.3	.07	2.3	6.2	1.6	3.8 5.5	78.8	5.1	15.9
October 31	82.3	5.1	....	2.3	6.2	1.4	....	74.2	8.2	17.6
November 1	86.2	4.7	....	1.9	7.0	1.6	....	78.2	2.1	19.8
November 2	79.3	5.7	.08	2.2	6.6	1.7	4.1 5.9	77.9	7.0	15.1
November 3	83.4	4.6	.2	1.9	6.1	1.6	2.1 3.7	82.1	6.0	11.9
November 4	85.8	3.8	....	2.0	5.1	1.3	....	77.3	5.7	17.0
November 5	80.6	6.7	.3	1.8	5.8	1.5	3.1 4.7	78.3	6.7	15.0
November 6	84.6	5.0	.06	2.2	5.7	1.5	.9 2.3	79.6	5.3	15.1
November 7	81.6	4.4	.1	2.3	5.5	1.4	4.4 5.9	77.4	9.2	13.2
Average	82.8	4.9	.1	2.1	6.0	1.5	3.0 4.5	78.5	6.4	15.1

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject W. C. R.

FORE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 6	80.0	5.4	0.7	2.1	4.1	....	7.4	79.7	5.6	14.6
July 7	....	....	.8	1.8	5.3	0.2	3.7 3.9	....	....	....
July 8	86.5	4.2	.9	1.5	4.1	.06	3.7 3.8	78.6	7.8	13.5
July 9	84.6	5.0	.7	1.1	4.0	.7	3.5 4.2	80.8	5.4	13.7
July 10	82.2	6.0	.9	1.3	4.8	.9	3.7 4.6	82.8	7.1	10.1
July 11	82.6	5.1	.9	1.6	4.7	....	4.9	77.7	1.5	20.8
July 12	84.1	4.5	1.0	1.1	5.0	....	4.0	79.4	6.0	14.6
Average	83.3	5.0	.8	1.5	4.6	.5	3.6 4.7	78.9	5.5	14.6
July 13	82.7	7.4	.7	1.7	5.4	....	1.5	78.8	6.6	14.6
July 14	79.7	6.0	.5	1.7	4.5	....	7.3	85.0	9.2	5.8
July 15	83.2	4.2	.8	1.5	5.6	....	4.7	69.2	6.6	24.2
July 16	85.3	4.6	.7	1.5	5.6	....	2.3	69.8	5.6	24.7
July 17	80.3	5.2	.2	1.9	5.4	....	6.9	78.4	3.9	21.2
July 18	85.3	4.4	.8	1.3	4.8	....	3.4	71.7	4.8	23.5
July 19	79.3	5.4	.8	1.5	5.9	....	6.5	71.7	6.2	22.1
Average	82.4	5.4	.6	1.6	5.3	....	4.7	74.4	6.0	19.4

FIRST BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
July 20	82.5	4.5	0.2	2.1	4.4	....	6.0	75.3	3.7	21.1
July 21	82.0	5.7	.6	1.5	5.0	....	5.2	71.7	4.6	23.7
July 22	85.4	5.7	....	1.5	5.6	0.2	....	73.0	6.7	20.3
July 23	79.6	5.1	1.1	1.5	7.1	.4	4.3 4.8	66.8	7.1	26.1
July 24	81.0	4.7	.5	1.8	6.0	....	5.8	67.2	9.7	23.1
July 25	79.7	6.5	.4	1.8	5.1	....	6.5	74.2	8.0	17.8
July 26	86.6	5.7	.4	2.1	....	....	....	69.6	4.7	25.7
Average	82.5	5.5	.5	1.7	5.5	.3	5.7	71.6	6.2	22.2
July 27	83.0	4.2	.7	1.9	6.6	....	3.4	69.3	5.0	25.7
July 28	82.3	6.0	.8	1.6	6.5	....	2.8	71.7	6.7	21.6
July 29	84.8	4.5	.4	2.1	6.3	....	1.9	66.6	6.7	26.7
July 30	84.1	4.4	.6	1.5	6.0	....	3.4	68.5	7.1	24.4
July 31	84.4	3.6	.3	2.2	6.3	....	3.0	65.2	6.2	28.6
August 1	85.2	4.0	.3	2.1	6.5	....	1.8	62.3	7.0	30.6
August 2	81.4	4.6	.5	2.3	7.2	....	3.9	67.1	3.1	29.8
Average	83.6	4.5	.5	2.1	6.5	....	2.8	67.1	5.9	27.0
August 3	82.4	3.7	1.1	1.4	5.9	....	5.5	59.2	5.7	35.1
August 4	82.6	3.7	.7	2.0	6.2	....	4.6	63.9	5.3	30.8
August 5	83.7	3.7	.8	1.7	6.0	....	4.0	69.6	4.6	25.7
August 6	85.5	4.4	.7	1.3	6.0	....	2.1	67.3	7.4	25.3
August 7	80.8	4.7	.4	2.4	6.1	....	5.2	69.5	5.2	25.3
August 8	81.8	4.4	.5	1.8	6.2	....	5.0	64.9	8.2	26.6
August 9	83.4	4.7	.7	1.9	5.9	....	3.2	72.4	5.8	21.8
Average	82.8	4.2	.7	2.0	6.0	....	4.2	66.7	5.9	27.2
August 10	84.9	3.7	....	1.4	5.6	.8	....	75.2	5.8	18.9
August 11	88.1	2.6	.5	1.6	4.7	.5	2.0 2.5	69.5	7.2	23.2
August 12	88.1	3.9	....	1.6	5.5	....	....	67.4	5.3	27.2
August 13	84.2	4.4	.5	1.8	6.2	....	2.3	67.7	5.7	26.6
August 14	85.1	3.1	.3	2.4	5.4	....	3.4	73.4	6.2	20.4
August 15	84.0	4.1	.6	1.6	6.7	....	3.0	71.0	9.0	20.0
August 16	80.3	4.8	.5	2.0	6.7	....	5.5	68.7	6.0	25.2
Average	84.8	3.9	.5	1.8	5.7	.6	3.3	70.5	6.4	23.1
August 17	81.2	4.3	.4	2.1	6.7	....	5.1	66.7	8.0	25.3
August 18	83.5	2.4	.6	1.9	7.1	....	4.5	63.8	8.0	28.2
August 19	79.4	4.3	.8	1.7	7.2	....	6.4	67.9	6.7	25.4
August 20	83.4	3.6	.7	1.8	6.3	....	4.0	67.5	6.7	25.7

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject W. C. R.—Continued.

FIRST BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
August 21	87.0	2.5	0.2	2.1	5.5	....	2.6	79.3	5.6	15.1
August 22	83.8	3.3	.3	1.6	5.7	....	5.0	70.4	7.2	22.4
August 23	85.6	3.7	.9	1.6	5.7	....	2.3	76.6	6.9	16.4
Average	83.4	3.5	.6	2.0	6.3	....	4.2	70.3	6.9	22.7
August 24	84.6	3.6	.5	1.6	5.1	0.1	4.3 4.5	74.3	4.5	21.1
August 25	86.3	3.3	.3	1.6	4.9	.5	2.8 3.4	76.0	5.2	18.8
August 26	87.4	3.2	.1	1.9	5.4	1.1	.6 1.9	73.3	5.3	21.4
August 27	85.0	3.4	.4	1.8	5.4	.7	3.1 3.8	74.1	4.4	21.4
August 28	86.1	2.9	.2	1.9	5.6	....	3.3	80.3	6.5	12.8
August 29	86.1	3.8	.5	1.8	5.7	....	2.0	72.4	6.5	20.9
August 30	85.5	3.9	.8	1.6	6.6	....	1.5	82.0	2.9	15.0
Average	85.7	3.4	.4	1.8	5.5	.6	2.7 2.9	75.4	5.2	19.4
August 31	84.6	2.7	.5	2.0	7.0	1.1	1.8 2.9	78.4	10.9	10.7
September 1	86.0	2.0	.2	1.7	5.9	1.0	3.5 3.6	72.3	7.7	19.6
September 2	....	2.3	.5	1.6	6.2	1.0	....	76.1	4.3	19.6
September 3	83.8	3.6	.4	1.8	6.0	1.0	3.1 4.2	75.0	5.6	19.4
September 4	84.2	3.6	....	2.2	6.0	....	....	73.4	5.7	20.4
September 5	84.5	4.8	.5	1.8	5.9	....	2.2	77.3	7.3	15.4
September 6	84.5	4.1	.7	1.7	6.4	....	2.4	76.6	5.3	18.1
Average	84.6	3.3	.5	1.8	6.2	1.0	2.8 3.0	75.6	6.5	17.8
September 7	82.3	5.0	.5	2.1	6.2	.7	2.9 3.6	75.0	8.7	15.3
September 8	86.6	3.5	.2	2.0	5.9	.6	1.1 1.7	76.5	6.6	16.7
September 9	85.6	3.7	.6	1.6	6.5	.7	1.0 1.7	79.1	4.7	16.1
September 10	86.4	3.2	.3	2.0	6.2	.6	1.2 1.8	72.3	6.0	21.7
September 11	85.6	4.0	.5	1.9	6.5	.7	2.5 1.2	79.9	8.7	11.2
September 12	84.5	3.3	.5	1.6	5.8	.6	3.4 4.0	75.7	8.9	15.3
September 13	85.6	3.0	.2	1.8	5.5	.6	3.0 3.6	80.2	4.9	14.9
Average	85.4	3.6	.4	1.9	6.1	.6	1.9 2.5	76.7	6.8	16.2
September 14	85.1	4.5	.4	1.9	5.7	1.1	1.0 2.1	81.4	7.0	11.5
September 15	84.3	4.6	.6	1.6	6.1	1.0	1.8 2.8	83.4	5.7	10.7
September 16	85.5	3.6	.3	1.9	5.2	.9	2.4 3.3	76.1	6.2	17.7
September 17	84.2	3.9	.4	1.7	5.9	1.0	2.6 3.6	76.4	6.0	17.4
September 18	87.3	3.5	.2	1.7	5.1	1.0	1.1 2.1	86.5	3.8	9.6
September 19	85.2	4.0	.7	1.4	5.5	1.0	1.9 2.9	83.4	8.3	8.3
September 20	82.6	4.6	.6	2.0	5.9	1.2	3.0 4.2	76.1	7.3	16.1
Average	85.0	4.1	.4	1.7	5.6	1.0	2.0 3.0	80.4	6.3	13.1

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject W. C. R.—Continued.

FIRST AFTER PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
September 21	85.6	4.3	0.4	1.9	6.0	0.5	1.1 1.6	81.6	4.9	13.5
September 22	96.8	3.2	.3	1.8	5.7	.5	1.5 2.0	79.5	7.5	13.0
September 23	86.8	4.3	.6	1.4	5.4	.5	0.8 1.4	79.5	4.5	15.0
September 24	83.7	3.2	.6	1.6	5.3	.5	5.0 5.5	80.7	5.8	13.5
September 25	86.2	4.9	.4	1.8	6.2	.5	.0 .5	....	....	....
September 26	83.7	4.3	.6	1.8	6.2	.5	2.6 3.1	80.8	8.0	11.1
September 27	83.1	4.0	.7	1.3	5.8	.5	4.4 4.9	79.4	4.6	15.0
September 28	84.0	3.5	.6	1.6	5.4	.5	4.2 4.7	81.3	6.9	11.8
September 29	85.9	3.0	.1	1.7	6.0	.5	2.5 3.0	75.3	7.0	17.7
September 30	84.5	5.2	.2	1.7	5.9	.5	1.3 1.8	79.3	5.2	15.5
Average	85.1	4.0	.5	1.7	5.8	.5	2.4 2.9	79.8	6.1	14.1

SECOND BENZOATE PERIOD.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 1	82.6	4.4	0.4	1.6	6.0	0.4	4.6 4.9	76.7	6.5	16.8
October 2	84.3	4.9	.5	1.6	5.3	.3	3.0 3.3	80.1	3.6	16.3
October 3	85.2	5.0	.4	1.7	5.1	.3	2.1 2.4	86.3	8.1	5.6
October 4	84.2	4.5	.4	1.7	5.7	.3	3.0 3.3	76.7	2.1	21.2
October 5	83.8	4.1	.4	1.7	5.8	.3	3.7 4.0	86.2	5.6	8.2
October 6	87.2	3.4	.7	1.5	5.4	.3	1.4 1.7	78.8	5.8	15.3
October 7	85.2	4.3	.2	1.7	6.1	.4	1.8 2.2	78.7	6.3	15.0
Average	84.6	4.4	.4	1.7	5.6	.3	2.8 3.1	80.5	5.3	14.2
October 8	85.6	3.3	.2	1.7	6.0	.9	2.0 3.0	83.3	6.4	10.2
October 9	84.5	4.3	.5	1.6	5.9	1.0	2.0 3.0	83.4	3.6	13.0
October 10	82.5	4.8	.3	1.8	6.4	.9	3.1 4.1	77.6	7.7	14.7
October 11	82.7	5.3	.4	1.7	6.2	.9	2.6 3.5	82.7	4.6	12.7
October 12	84.8	3.8	.4	1.6	5.3	.8	3.1 4.0	78.4	8.4	13.2
October 13	84.3	3.7	.4	1.5	5.5	.9	3.5 4.4	76.8	6.1	17.1
October 14	83.8	4.6	.4	1.6	5.6	.9	2.9 3.8	79.7	6.8	14.3
Average	84.0	4.3	.4	1.6	5.8	.9	2.8 3.7	80.3	6.2	13.5
October 15	79.0	5.4	.4	2.2	6.4	2.4	3.9 6.3	77.0	5.9	16.1
October 16	78.2	5.0	.5	1.8	6.7	2.4	5.3 7.8	77.8	4.8	17.3
October 17	83.3	4.8	.2	2.0	6.2	2.3	1.2 3.5	78.9	7.1	13.9
October 18	85.2	4.8	.4	1.7	6.2	2.1	.0 1.6	80.6	....	18.4

Percentages of total nitrogen and total sulphur in urine—Continued.

Subject W. C. R.—Continued.

SECOND BENZOATE PERIOD—Continued.

Date.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
October 19	80.7	4.2	0.4	1.7	6.2	2.2	4.3 6.6	76.3	6.1	17.6
October 20	82.7	3.8	.3	1.7	6.7	2.3	2.2 4.5	79.3	5.4	15.3
October 21	82.8	4.0	.2	1.9	5.2	1.9	3.7 5.7	77.1	2.9	20.0
Average	82.0	4.5	.3	1.9	6.2	2.2	2.9 5.1	78.1	5.3	17.3
October 22	81.1	5.4	.2	1.6	5.4	4.1	2.0 6.2	81.1	6.9	11.9
October 23	82.3	4.2	.5	1.4	5.1	3.9	2.5 6.4	83.0	4.4	12.6
October 24	80.9	3.1	....	1.7	5.6	4.2	....	78.3	8.2	13.4
October 25	81.1	4.5	.4	1.6	5.8	4.3	2.1 6.5	83.4	2.7	13.8
October 26	81.2	4.4	.2	1.8	5.8	4.0	2.6 6.7	78.8	4.4	16.6
October 27	84.8	3.3	.4	1.7	5.3	4.1	.1 4.2	76.0	4.9	19.1
October 28	80.1	5.3	.5	1.3	5.3	4.2	3.0 7.2	77.2	3.6	19.1
Average	81.6	4.4	.3	1.7	5.4	4.1	2.1 6.2	79.6	5.0	15.2
FINAL AFTER PERIOD.										
October 29	83.4	4.7	0.2	1.5	5.5	1.5	3.0 3.5	78.2	6.9	14.9
October 30	84.4	3.8	.1	1.8	5.4	1.4	2.7 4.1	78.2	3.4	18.4
October 31	83.6	4.1	.1	1.8	5.8	1.3	3.2 4.5	78.8	8.9	12.3
November 1	82.1	4.9	.3	1.8	5.7	1.5	3.4 4.9	75.2	10.4	14.4
November 2	83.6	3.7	.1	1.9	5.9	1.5	3.1 4.6	80.2	4.8	15.0
November 3	81.7	4.2	.06	2.0	5.5	1.4	4.8 6.8	75.6	6.4	18.0
November 4	86.1	4.1	....	1.9	5.0	1.3	....	80.7	4.3	14.9
November 5	82.3	5.4	.2	1.7	5.1	1.3	3.8 5.1	76.7	7.7	15.6
November 6	85.4	4.2	.06	1.9	5.5	1.4	1.6 3.0	77.1	7.5	15.4
November 7	82.7	3.5	.3	1.8	5.3	1.2	5.0 6.2	76.6	7.7	15.6
Average	83.6	4.3	.1	1.8	5.5	1.4	3.2 4.6	77.8	6.7	15.4

FOOD CHARTS OF THE INDIVIDUAL SUBJECTS, SHOWING CHARACTER AND AMOUNT OF DAILY FOOD, NITROGEN CONTENT, AND, DURING GIVEN PERIODS, CONTENT OF FAT, JULY 6 TO NOVEMBER 7, 1908.

Daily food chart.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
July 6.	Per ct.	Per ct.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.
Bread	0.73		123	0.90								77	0.56		117	0.85		116	0.85	
Rolls	1.48		58	.86		49	0.73		49	0.73		51	.75		55	.81		32	.47	
Pie	.77		152	1.17					145	1.12		151	1.16		162	1.25		150	1.16	
Cake	.93		56	.52		20	.19		67	.62		54	.50					53	.49	
Crackers	1.53					16	.24		20	.31					23	.35				
Toast	1.10		95	1.05					78	.86		63	.69		66	.73		67	.74	
Cream of wheat	.15		188	.28		165	.25		175	.26		181	.27		166	.25		174	.26	
Sirup			49						46			55			49			31		
Beefsteak	4.41		61	2.69		74	3.26		58	2.56		78	3.44		90	3.97		67	2.95	
Soup	.41		178	.73		178	.73		178	.73		178	.73		178	.73		178	.73	
Croquettes	2.04		48	.98		51	1.04		39	.80		51	1.04		36	.73				
Cheese	4.04		20	.81					19	.77		15	.61					14	.57	
Butter	.10		42	.04		29	.03		31	.03		37	.04		22	.02		44	.04	
Eggs	1.97											47	.93		51	1.00		41	.81	
Milk	.55		300	1.65		700	3.85		500	2.75		100	.55		450	2.48				
Sugar			34			45			74			82			60			34		
Potatoes:																				
Boiled	.25		77	.18		76	.17		112	.28		73	.18		95	.24		80	.20	
Baked	.37		80	.29		76	.28					110	.37		87	.32		104	.38	
Boiled onions	.11		147	.16		90	.10		82	.09		95	.10		100	.11		83	.09	
Tomatoes	.09								80	.07		96	.09		109	.10		105	.09	
Raspberries	.16		123	.18		115	.17		90	.13		122	.18		125	.19		102	.15	
Bananas	.15					96	.15		91	.14		91	.14		84	.14		71	.11	
Coffee	.05		150	.08					150	.08										
Lemonade			750			700						600			500			700		
Total				12.57			11.29			12.33			12.36			14.27			10.09	
July 7.																				
Bread	.73		141	1.03								49	.36		115	.84		124	.91	
Rolls	1.48		45	.67								51	.75		48	.71		46	.68	
Crackers	1.53								26	.40					31	.47				
Cookies	1.16		20	.23		15	.17		21	.24		15	.17		15	.17				

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
July 7—Continued.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Gingerbread	0.74	...	38	0.28	...	35	0.30	...	40	0.30	...	39	0.35	...	38	0.28	...	45	0.33	...
Blancmange	.58	...	117	.68	...	104	.60	...	111	.64	...	109	.63	...	110	.64	...	48	.28	...
Muffins	1.20	...	103	1.24	...	99	1.19	...	99	1.19	...	146	1.75	...	99	1.18	...	92	1.10	...
Fritters	.88	...	38	.33	...	44	.39	...	36	.32	...	34	.30	...	35	.31	...	43	.38	...
Force	2.05	...	21	.43	...	21	.43	...	21	.43	...	24	.49	...	23	.47	...	24	.49	...
Roast lamb	5.45	...	50	2.73	...	52	2.83	...	45	2.45	...	40	2.18	...	50	2.73	...	35	1.91	...
Ham	4.43	...	27	1.19	...	32	1.42	...	30	1.33	...	37	1.64	...	34	1.51	...	36	1.59	...
Soup	.39	...	195	.76	...	195	.76	...	195	.76	...	195	.76	...	195	.76	...	195	.76	...
Hash	1.39	...	103	1.43	...	95	1.32	...	94	1.31	...	100	1.39	...	...	...	...	88	1.22	...
Cheese	3.32	...	15	.50	...	22	.73	...	53	1.76	...	13	.43	...	11	.37	...	11	.37	...
Butter	.10	...	54	.05	...	32	.03	...	37	.03	...	50	.05	...	29	.03	...	37	.04	...
Milk	.55	...	500	2.75	...	500	2.75	...	450	2.48	...	200	1.10	...	650	3.58	...	50	.28	...
Sugar	...	...	22	...	...	26	...	...	68	...	...	96	...	...	101	...	...	13	...	...
Peas	1.03	...	56	.58	...	67	.69	...	50	.52	...	56	.58	...	58	.60	...	49	.50	...
Mashed potatoes	.30	...	126	.38	...	65	.20	...	117	.35	...	89	.27	...	85	.26	...	86	.26	...
Baked potatoes	.37	...	76	.28	...	88	.33	...	95	.35	...	83	.31	...	91	.34	...	86	.32	...
Lettuce	.08	...	...	...	...	...	...	...	65	.05	...	60	.05	...	...	...	...	...	...	...
Bananas	.16	...	...	...	...	72	.12	...	65	.11	...	67	.16	...	85	.14	...	75	.12	...
Tea	.007	...	...	...	...	...	...	...	500	.04	...	500	.04	...	500	.04	...	700	.05	...
Coffee	.05	...	150	.08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	15.62	...	...	14.26	...	...	15.05	...	...	13.72	...	...	15.43	...	...	11.59	...
July 8.																				
Bread	.73	...	151	1.10	...	46	.34	...	73	.53	...	56	.41	...	146	1.07	...	102	.74	...
Rolls	1.48	...	52	.77	...	52	.77	...	53	.78	...	45	.67	...	43	.64	...	47	.70	...
Crackers	1.53	...	...	...	...	17	.26	...	30	.46	...	...	...	...	37	.57	...	35	.55	...
Cookies	1.03	...	23	.24	...	15	.15	...	14	.14	...	14	.14	...	13	.13	...	14	.14	...
Cake	1.34	...	15	.20	...	28	.37	...	28	.37	...	25	.34	...	29	.39	...	29	.39	...
Shredded wheat	1.64	...	34	.56	...	32	.52	...	...	...	...	31	.51	...	32	.52	...	...	...	...
Roast beef	5.36	...	85	4.56	...	55	2.95	...	52	2.79	...	62	3.32	...	89	4.77	...	78	4.18	...
Veal loaf	2.08	...	55	1.14	...	35	.73	...	96	2.00	...	53	1.10	...	59	1.23	...	24	.50	...
Soup	.14	...	184	.26	...	184	.26	...	184	.26	...	184	.26	...	184	.26	...	184	.26	...
Steamed clams	2.82	...	...	...	...	96	2.71	...	...	...	...	140	3.95	...	72	2.03	...	75	2.12	...
Clam broth	.12	...	...	...	...	76	.09	...	...	...	...	165	.20	...	...	...	...	50	.06	...
Butter	.10	...	41	.04	...	49	.05	...	38	.04	...	32	.03	...	21	.02	...	31	.03	...

Eggs	1.97								52	1.02		49	.97		45	.89		45	.89	
Milk	.55		250	1.38		750	4.13		600	3.30		58	.28		150	.83				
Ice cream	.57		93	.53		96	.55		95	.54		124	.71		92	.52		98	.56	
Sugar			27			27			54			69			70			10		
String beans	.22		71	.16		71	.16		65	.14		114	.25		79	.17		76	.17	
Potatoes:																				
Boiled	.25		85	.21		128	.32		113	.28		72	.18		111	.28		89	.22	
French fried	.67		60	.40		53	.36		33	.22		47	.31		60	.40		59	.40	
Cucumbers	.07		46	.03		47	.03		47	.03		47	.03		47	.03		47	.03	
Muskmelon	.14		98	.14		66	.09		66	.09		117	.16		110	.15		103	.14	
Oranges	.14		115	.16		104	.15		133	.19		105	.15		126	.18		115	.16	
Tea	.007								400	.03		500	.04		500	.04		650	.05	
Coffee	.05		150	.08								150	.08							
Total				11.96			14.69			13.21			14.09			15.12			12.29	
July 9.																				
Bread	.73		52	.38								90	.66		175	1.28		80	.58	
Rolls	1.48		45	.67		47	.70		45	.67		48	.71		105	1.55		100	1.48	
Pie	.46		114	.52		120	.55		95	.44		105	.48		110	.51		106	.49	
Cake	.77		45	.35		47	.36		41	.32		47	.36					45	.35	
Crackers	1.54					17	.26		24	.37					21	.32				
Muffins	1.20		155	1.86		58	.70		99	1.19		86	1.03		109	1.31		156	1.87	
Fried mush	.64		53	.34		62	.40		45	.29		59	.38		60	.38		49	.31	
Sirup			32			54			28			45			30			44		
Roast lamb	5.11		64	3.27		112	5.72		69	3.53		81	4.09		39	1.99		61	3.12	
Beefsteak	4.41		65	2.87		55	2.43		56	2.47		70	3.09		61	2.69		82	3.62	
Hash	.93		102	.95		110	1.02		112	1.04		130	1.21		130	1.21		114	1.09	
Soup	.10		185	.19		185	.19		185	.19		185	.19		185	.19		185	.19	
Cheese	4.04		21	.85		20	.81		21	.85		22	.89		20	.81		13	.53	
Butter	.10		41	.04		26	.03		24	.02		45	.05		54	.05		44	.04	
Milk	.55		800	4.40		900	4.95		700	3.85		100	.55		700	3.85				
Sugar			42			65			126			91			65			59		
Potatoes:																				
Boiled	.25		110	.28		40	.10		96	.24		57	.14		96	.24		110	.28	
French fried	.67		51	.34		52	.35		55	.37		40	.27		66	.44		56	.38	
Peas	1.03		87	.90		62	.64		64	.66		86	.89		61	.63		72	.74	
Raspberries	.15		56	.08		60	.09		55	.08		80	.12		58	.09		46	.07	
Currants	.28		42	.11		50	.14		53	.15		55	.15		56	.16		80	.22	
Huckleberries	.10		129	.13		155	.16		102	.10		135	.14		100	.10		109	.11	
Tea	.007								600	.04		500	.04		250	.02		700	.05	
Coffee	.05		150	.08					150	.08										
Total				18.61			19.60			16.95			15.44			17.82			15.52	
July 10.																				
Bread	.73		98	.72		34	.25		46	.34		156	1.14		170	1.24		178	1.30	
Rolls	1.48		55	.81		52	.77		50	.74		52	.77		98	1.46		58	.86	
Pie	.51		122	.62		132	.67		133	.68		124	.63		140	.71		119	.61	
Cake	.82		42	.34		41	.33		39	.32		33	.27		45	.41		34	.28	
Crackers	1.53					17	.26		24	.37					24	.37				

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
July 10—Continued.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Toast	1.62		40	0.65		45	0.73					44	0.71		44	0.71		33	0.53	
Force	2.05		23	.47		25	.51					23	.47		24	.49		20	.41	
Soup	.21		193	.41		193	.41		193	0.41		193	.41		193	.41		193	.41	
Hash	3.26		85	2.77		80	2.61		80	2.61		89	2.86		83	2.71		89	2.86	
Bluefish	4.51		103	4.65		61	2.75		60	2.71		98	4.42		95	4.28		62	2.80	
Cheese	4.04		18	.73		17	.69		14	.57		14	.57					16	.65	
Butter	.10		43	.04		54	.05		36	.04		44	.04		69	.07		47	.05	
Eggs	1.97								44	.87		52	1.02							
Milk	.55		400	2.20		800	4.40		500	2.75		350	1.93		500	2.75		50	.28	
Sugar			48			68			100			110			92			66		
Beets	.24		71	.17		69	.17		43	.10		63	.15		75	.18		61	.13	
Potatoes:																				
Boiled	.25		78	.20		105	.26		80	.20		80	.20		86	.22		87	.22	
Roasted	.37		113	.42		102	.38					101	.37		108	.41		97	.36	
Cucumbers	.07		81	.06		100	.07		84	.06		74	.05		72	.05		77	.05	
Raspberries	.15		82	.12		107	.16		83	.12		97	.15		105	.16		106	.16	
Blueberries	.09		165	.15		164	.15		140	.13		135	.12		139	.13		146	.13	
Tea	.007		250	.02					250	.02		500	.04		250	.02		950	.07	
Coffee	.05		150	.08					150	.08										
Total				15.63			15.69			13.12			16.32			16.78			12.20	
July 11.																				
Bread	.73		199	1.45		54	.39		33	.24		96	.70		153	1.12		135	.99	
Rolls	1.48		48	.71		47	.70		93	1.38		46	.68		96	1.40		34	.50	
Cake	.89		26	.23		23	.21		22	.20		21	.19					23	.20	
Crackers	1.53					22	.34		25	.38					22	.34				
Muffins	1.20		136	1.62		135	1.62		120	1.44		125	1.50		110	1.32		178	2.14	
Cream of wheat	.15		225	.34		230	.35					228	.34		222	.33		248	.37	
Pudding	.97		75	.73					68	.66		66	.64					70	.68	
Sauce	.36		57	.21					54	.19		49	.18					46	.17	
Roast beef	5.36		73	3.91		89	4.77		64	3.43		82	4.40		85	4.56		153	8.20	
Soup	.10		200	.20		200	.20		200	.20		200	.20		200	.20		200	.20	
Butter	.10		72	.07		72	.07		79	.08		57	.06		50	.05		70	.07	
Eggs	1.53		102	1.56		99	1.41		115	1.76		90	1.38		100	1.53				
Milk	.55		500	2.75		900	4.95		1,100	6.05		300	1.65		600	3.30				

Sugar			57			78			118			143			92			85		
String beans	.22		82	.18		92	.20		89	.20		80	.18		72	.16				
Boiled potatoes	.25		105	.26		100	.25		94	.24		96	.24		75	.19		110	.28	
Hashed potatoes	.42		98	.41		91	.38		97	.41		85	.36		93	.39		101	.43	
Tomatoes	.09		92	.08		95	.09		98	.09		85	.08		99	.09		87	.08	
Raspberries	.15		80	.12		99	.15		85	.13		79	.12		94	.14		81	.12	
Blackberries	.25		140	.35		140	.35		140	.35		140	.35		140	.35		140	.35	
Tea	.007								250	.02		250	.02		400	.03		900	.06	
Coffee	.05		150	.08					150	.08		150	.08							
Total				15.26			16.43			17.53			13.35			15.50			14.84	
July 12.																				
Bread	.73		115	.84					75	.55		72	.52		89	.65		57	.42	
Rolls	1.48		52	.77		50	.74		49	.73		97	1.44		95	1.42		31	.46	
Crackers	1.53					24	.38													
Cookies	1.14		35	.40		38	.43		34	.39		31	.35					19	.24	
Cake	1.25		23	.29					23	.29		24	.30		24	.30		28	.32	
Biscuits	1.28		97	1.24		54	.69		102	1.30		92	1.18		148	1.89		98	1.25	
Force	2.05		32	.66		32	.66		105	2.15		32	.66		32	.66				
Fritters	.88		59	.52		65	.57		60	.53		60	.53		68	.60		72	.63	
Sirup			51			65			65			80			77			36		
Roast beef	5.36		40	2.14		44	2.36		57	3.06		38	2.04					50	2.68	
Lamb chops	4.90																	49	2.40	
Chicken	5.65		79	4.46		95	5.37		65	3.67		53	2.99		50	2.83				
Soup	.23		195	.45		195	.45		195	.45		195	.45		195	.45		195	.45	
Fish cakes	1.46		60	.88		71	1.04		62	.91		72	1.05		85	1.24		60	.88	
Butter	.10		48	.05		33	.03		50	.05		45	.05		73	.07		28	.03	
Eggs	1.97																	60	1.18	
Milk	.55		450	2.48		750	4.13		900	4.95		250	1.38		600	3.30				
Ice cream	.57		80	.46		81	.46		92	.52		88	.50					90	.51	
Jelly	.33		124	.41					130	.43		128	.43		128	.43		70	.23	
Sugar			35			28			52			115			54					
Peas	1.03		83	.85		65	.67		80	.82		100	1.03		72	.74		70	.72	
Boiled potatoes	.25		90	.23		80	.20		80	.20		75	.19		100	.25		79	.20	
Muskmelon	.13		98	.12		119	.15		30	.04		128	.17		128	.17		113	.15	
Tea	.007								300	.02		250	.02		250	.02		600	.04	
Coffee	.05		150	.08					150	.08		150	.08							
Total				17.33			18.33			21.14			15.36			14.92			13.11	
July 13.																				
Bread	.73	1.75	176	1.28	3.08	59	.43	1.03	76	.55	1.33	101	.73	1.77	139	1.01	2.33	100	.73	1.75
Rolls	1.48	4.47	104	1.54	4.65	48	.71	2.14	45	.67	2.01	45	.67	2.01	96	1.42	4.29	47	.70	2.10
Custard pie	.88	10.45	130	1.14	13.59	162	1.43	16.93	155	1.36	16.20	148	1.30	15.47	156	1.37	16.30	78	.69	8.15
Crackers	1.53	13.29				12	.18	1.59	28	.43	3.72									
Toast	1.62	3.04	77	1.25	2.34	40	.65	1.22	34	.55	1.03	78	1.26	2.37	94	1.52	2.86	33	.53	1.00
Cream of wheat	.15	.29	200	.30	.58	200	.30	.58				200	.30	.58	205	.31	.59	210	.32	.61
Roast beef	4.67	5.63	51	2.38	2.87	55	2.57	3.10	48	2.24	2.70	60	2.80	3.38	65	3.04	3.66	25	1.17	1.41
Chicken broth	.34	.61	187	.64	1.14	187	.64	1.14	187	.64	1.14	187	.64	1.14	187	.64	1.14	187	.64	1.14
Chicken hash	2.61	9.52				75	1.96	7.14	113	2.95	10.76	102	2.66	9.71				95	2.48	9.04

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
July 13—Continued.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Macaroni	0.58	5.84	74	0.43	4.32	56	0.32	3.27	75	0.44	4.38	64	0.37	3.74	75	0.44	4.38	70	0.43	4.09
Butter	.10	84.42	87	.09	73.45	46	.04	38.83	46	.04	38.83	72	.07	60.78	50	.05	42.21	51	.95	43.05
Scrambled eggs	1.53	19.09							85	1.30	16.23	69	1.06	13.17				61	.93	11.64
Milk	.55	3.16	400	2.20	12.64	650	3.58	20.54	1,050	5.78	33.18	60	.33	1.90	150	.83	4.74			
Sugar			58			35			45			87			63			63		
Beets	.24	1.33	56	.13	.75	63	.15	.84	40	.10	.53	62	.15	.82	53	.13	.71	6	.01	.08
Boiled potatoes	.25	.36	74	.19	.27	58	.15	.21	62	.16	.22	68	.17	.24	53	.13	.19	73	.18	.26
Baked potatoes	.37	.14				85	.31	.12				132	.49	.18	176	.65	.25	108	.40	.15
Bananas	.16	.19				97	.16	.18	101	.16	.19	110	.18	.21	101	.16	.19	95	.15	.18
Peaches	.06	.19	309	.19	.59	150	.09	.29	150	.09	.29	150	.09	.29	274	.16	.52	150	.09	.29
Tea	.007	.02							400	.03	.08	250	.02	.05	500	.04	.10	650	.05	.13
Coffee	.05	.04	150	.08	.06				150	.08	.06									
Total				11.84	120.33		13.67	99.15		17.57	132.88		13.29	117.81		11.90	84.46		9.53	85.07
July 14.																				
Bread	.73	1.75	100	.73	1.75	46	.34	.81				128	.93	2.24	144	1.05	2.52	109	.80	1.91
Rolls	1.48	4.47	98	1.45	4.38	46	.68	2.06	45	.67	2.01	49	.73	2.19	108	1.60	4.83	96	1.42	4.29
Molasses cake	1.08	8.03	70	.76	5.62	62	.67	4.98	23	.25	1.85	63	.68	5.06	60	.65	4.82	55	.59	4.42
Crackers	1.53	13.29				20	.31	2.66	25	.38	3.32									
Rice	.27	.10	121	.33	.12	121	.33	.12	121	.33	.12	121	.33	.12	121	.33	.12	121	.33	.12
Force	2.05	2.06	23	.47	.47	23	.47	.47				23	.47	.47	23	.47	.47			
Muffins	1.22	8.87	80	.98	7.10	98	1.20	8.69	233	2.84	20.67	87	1.06	7.72	142	1.73	12.60	89	1.07	7.89
Bread pudding	.84	2.69	130	1.09	3.50	131	1.10	3.52	140	1.18	3.77	138	1.16	3.65				139	1.17	3.74
Hamburg steak	4.25	9.81	85	3.61	8.34	84	3.57	8.24	95	4.04	9.32	75	3.19	7.36	66	2.81	6.47	77	3.27	7.55
Roast beef	5.36	5.63							27	1.45	1.52	36	1.93	2.03						
Tomato soup	.29	2.13	183	.53	3.90	183	53	3.90	183	.53	3.90	183	.53	3.90	183	.53	3.90	183	.53	3.90
Butter	.10	84.42	84	.08	70.91	57	.06	48.12	95	.09	80.20	90	.09	75.98	74	.07	62.47	65	.07	54.87
Scrambled eggs	1.53	19.09										97	1.48	18.52				80	1.22	1.53
Milk	.55	3.16	550	3.03	16.67	750	4.13	23.70	650	3.58	20.54	250	1.38	7.90	300	1.65	9.48			
Sugar			43			39			111			100			74			11		
Beets	.24	1.33	93	.22	1.24	65	.16	.86	27	.06	.36	105	.25	1.40	67	.16	.89			
Boiled potatoes	.25	.36	127	.32	.46	57	.14	.21	52	.13	.19	70	.18	.25	67	.17	.24	69	.17	.25
Potato chips	.77	47.33				19	.15	8.99	15	.12	7.10	15	.12	7.10	51	.39	24.14	15	.12	7.10
Muskmelon	.13	.32	194	.25	.62	156	.20	.50	96	.12	.31	194	.25	.62	110	.14	.35	168	.22	.54
Bananas	.16	.19				87	.14	.17	82	.13	.16	104	.17	.20	95	.15	.18	81	.13	.15

Tea	.007	.02							150	.01	.03	500	.04	.10	350	.02	.07	800	.06	.16
Coffee	.05	.04	150	.08	.06				150	.08	.06									
Total				13.93	125.14		14.18	118.00		15.99	155.43		14.97	146.81		11.92	133.55		11.19	98.42
July 15.																				
Bread	.73	1.75	93	.68	1.63	28	.20	.49				100	.73	1.75	132	.96	2.31	102	.74	1.79
Rolls	1.48	4.47	51	.75	2.28	45	.67	2.01				50	.74	2.24	101	1.49	4.51	53	.78	2.37
Plain cake	.96	12.37	38	.36	4.70				33	.32	4.08	30	.29	3.71	36	.35	4.45	40	.38	4.95
Gold cake	1.06	14.48	45	.48	6.52	42	.45	6.08	165	1.75	23.89	50	.53	7.24	47	.50	6.81	40	.42	5.79
Crackers	1.53	13.29				19	.29	2.53	25	.38	3.32									
Toast	1.62	3.04	61	.99	1.85	34	.55	1.03	48	.78	1.46	44	.71	1.34	75	1.22	2.29	39	.63	1.19
Quaker oats	.36	.35	200	.72	.70	208	.75	.73	114	.41	.40	205	.74	.72	214	.77	.75	204	.73	.71
Pot roast	6.30	4.95	30	1.89	1.49	24	1.51	1.19	71	4.47	3.51	30	1.89	1.49	63	3.97	3.12	32	2.02	1.58
Gravy	.67	3.78	26	.17	.98	35	.23	1.32	37	.25	1.40	30	.20	1.13	51	.34	1.93	30	.20	1.13
Beef croquettes	4.31	8.12				38	1.64	3.09	93	4.01	7.55	90	3.88	7.31				50	2.16	4.06
Potato soup	.07	1.40	195	.14	2.73	195	.14	2.73	195	.14	2.73	195	.14	2.73	195	.14	2.73	195	.14	2.73
Butter	.10	84.42	40	.04	33.77	40	.04	33.77	15	.02	12.66	62	.06	52.34	23	.02	19.42	28	.03	23.64
Milk	.55	3.16	250	1.38	7.90				650	3.58	20.54	350	1.93	11.06	400	2.20	12.64			
Sugar			33			52			132			136			63			60		
Mashed potatoes	.31	.70	105	.33	.74	98	.30	.69	107	.33	.75	100	.31	.70	103	.32	.72	85	.26	.60
Hashed brown potatoes	.42	3.54	130	.55	4.60	96	.40	3.40	112	.47	3.96	190	.80	6.73	102	.43	3.61	94	.39	3.33
Wax beans	.30	1.89	72	.22	1.36	68	.20	1.29	83	.25	1.57	65	.20	1.23	66	.20	1.25			
Black raspberries	.15	.53	100	.15	.53	100	.15	.53	100	.15	.53	100	.15	.53	100	.15	.53	100	.15	.53
Peaches	.06	.19	165	.10	.31	165	.10	.31	165	.10	.31	165	.10	.31	165	.10	.31	165	.10	.31
Ice cream	.50	5.69	65	.33	3.70	112	.56	6.37	85	.43	4.84	73	.37	4.15	125	.63	7.11	78	.39	4.44
Tea	.007	.02							250	.02	.05	250	.02	.05	150	.01	.03	750	.05	.15
Coffee	.05	.04	150	.08	.06				150	.08	.05									
Total				9.36	75.85		8.18	67.56		17.94	93.60		13.79	106.76		13.80	74.52		9.57	59.30
July 16.																				
Bread	.73	1.75	88	.64	1.54	60	.44	1.05	124	.91	2.17	94	.69	1.65	174	1.27	3.05	155	1.13	2.71
Rolls	1.48	4.47	101	1.49	4.51	50	.74	2.24	51	.75	2.28	48	.71	2.15	95	1.41	4.25	48	.71	2.15
Blackberry pie	.57	10.13	147	.84	14.89	153	.87	15.50	151	.86	15.30	150	.90	16.01	155	.88	15.70	132	.75	13.37
Cream cake	1.03	12.18	61	.63	7.43	60	.62	7.31	57	.59	6.94	71	.73	8.65	59	.61	7.19	59	.61	7.19
Crackers	1.53	13.29				20	.31	2.66												
Toast	1.62	3.04	19	.31	.58	27	.44	.82	46	.75	1.40	16	.26	.49	67	1.09	2.04	42	.68	1.28
Force	2.05	2.06	25	.51	.52	25	.51	.52				25	.51	.52	25	.51	.52			
Roast lamb	4.89	10.56	70	3.42	7.39	62	3.03	6.55	63	3.08	6.65	55	2.69	5.81	60	2.93	6.34	50	2.45	5.28
Minced lamb	3.59	18.00	88	3.16	15.84	83	2.98	14.94	65	2.33	11.70	72	2.58	12.96				72	2.58	12.96
Tomato soup	.19	.94	192	.36	1.80	192	.36	1.80	192	.36	1.80	192	.36	1.80	192	.36	1.80	192	.36	1.80
Butter	.10	84.42	48	.05	40.52	36	.04	30.39	43	.04	36.30	58	.06	48.96	64	.06	54.03	53	.05	44.74
Milk	.55	3.16	400	2.20	12.64	750	4.13	23.70	500	2.75	15.80	300	1.65	9.48	250	1.38	7.90			
Sugar			63			59			117			33			132			58		
Wax beans	.30	1.89	60	.18	1.13	77	.23	1.46	50	.15	.95	68	.20	1.29	54	.16	1.02	69	.21	1.30
Boiled potatoes	.25	.36	90	.23	.32	71	.18	.26	63	.16	.28	77	.19	.28	80	.20	.29	103	.26	.37
Baked potatoes	.44	.14	88	.39	.12	46	.20	.06				70	.31	.10	92	.40	.13	76	.33	.11
Cucumbers	.07	.09	65	.05	.06	65	.05	.06	65	.05	.06	65	.05	.06	65	.05	.06			
Black raspberries	.15	.53	100	.15	.53	100	.15	.53	100	.15	.53	100	.15	.53	100	.15	.53	100	.15	.53
Blueberries	.09	.23	170	.15	.39	170	.15	.39	170	.15	.39	170	.15	.39	170	.15	.39	170	.15	.39

Daily food chart—Continued.

Date and kind of food	Nitrogen	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
July 16—Continued.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Tea	0.007	0.02	150	0.01	0.03				150	0.01	0.03	250	0.02	0.05	500	0.04	0.10	500	0.04	0.10
Coffee	.05	.04	150	.08	.06				150	.08	.06									
Total				14.85	110.30		15.43	110.24		13.17	102.59		12.21	111.18		11.65	105.34		10.46	94.28
July 17.																				
Bread	.73		100	.73		73	.53		106	.77		112	.82		150	1.10		111	.81	
Rolls	1.48		48	.71		46	.68		71	1.05		102	1.51		103	1.52		101	1.49	
Cream cake	1.03		47	.48		37	.38		47	.48		41	.42		43	.44		36	.37	
Cocoanut cake	.97		30	.29		30	.29		40	.39		39	.38		38	.37		37	.36	
Crackers	1.53					20	.31													
Biscuit	1.28		147	1.88		85	1.09		92	1.18		80	1.02		133	1.70		62	.79	
Cream of wheat	.15		250	.38		250	.38					250	.38		250	.38		250	.38	
Ham	4.73		5	.24					21	.99		23	1.09					20	.95	
Lamb soup	.45		195	.88		195	.88		195	.88		195	.88		195	.88		195	.88	
Bluefish	4.35		92	4.00		87	3.78		57	2.48		77	3.35		81	3.52		69	3.00	
Butter	.10		51	.05		48	.05		53	.05		86	.09		58	.06		32	.03	
Boiled eggs	1.97																	51	1.00	
Milk	.55		100	.55		600	3.30		750	4.13		200	1.10		150	.83				
Sugar			40			61			141			110			70			40		
Squash	.27		88	.24		75	.20					89	.24		99	.27				
Boiled potatoes	.25		93	.23		105	.26		98	.25		63	.16		83	.21		81	.20	
German fried potatoes	.67		67	.45		50	.34		40	.27		52	.35		57	.38		51	.34	
Cucumbers	.07		67	.05		67	.05					67	.05							
Orange ice	.03		116	.03		99	.03		77	.02		76	.02		89	.03		82	.02	
Peaches	.06		130	.08		130	.08		130	.08		130	.08		130	.08		130	.08	
Bananas	.16					102	.16		114	.18		125	.20		118	.19		101	.16	
Tea	.007		150	.01					300	.02		500	.04		300	.02		150	.01	
Coffee	.05		150	.08					150	.08										
Total				11.36			12.79			13.30			12.18			11.98			10.87	
July 18.																				
Bread	.73		100	.73		65	.47		111	.81		126	.92		157	1.15		113	.82	
Rolls	1.48		51	.75		45	.67		102	1.51		103	1.52		106	1.57		65	.96	

Chocolate cake	.92		89	.82		45	.41		40	.37		40	.37		44	.40				
Toast	1.62		55	.89		56	.91					48	.78		56	.91				
Force	2.05		25	.51		25	.51					25	.51		25	.51				
Roast beef	4.20		50	2.10		75	3.15		60	2.52		65	2.73		56	2.35		50	2.10	
Fish chowder	.24		205	.49		205	.49		205	.49		205	.49		205	.49		205	.49	
Baked beans	1.34		143	1.92		123	1.65					110	1.47		111	1.49		241	3.27	
Blancmange	.59		126	.74		121	.71					243	1.43					128	.76	
Butter	.10		56	.06		69	.07		91	.09		107	.11		68	.07		47	.05	
Scrambled eggs	1.53																	95	1.45	
Milk	.55		400	2.20		450	2.48		750	4.13		350	1.93		350	1.93				
Sugar			65			69			163			167			142			50		
Corn	.70		60	.42		90	.63		55	.39		64	.45		77	.54				
Mashed potatoes	.30		113	.34		110	.33		123	.37		95	.29		94	.28		100	.30	
Baked potatoes	.37		66	.24		65	.24								68	.25		89	.33	
Cucumbers	.07		65	.05		65	.05		65	.05		65	.05		65	.05				
Blackberries	.25		120	.30		120	.30		120	.30		120	.30		120	.30		120	.30	
Huckleberries	.10		115	.12		150	.15		150	.15		150	.15		150	.15		150	.15	
Tea	.007								450	.03		500	.04		350	.02		500	.04	
Coffee	.05		150	.08					150	.08										
Total				12.76			13.22			11.29			13.54			12.46			11.02	
July 19.																				
Bread	.73		111	.81		137	1.00		105	.77		147	1.07		141	1.03		96	.70	
Rolls	1.67		83	1.39		43	.72		41	.68		37	.62		86	1.44		39	.65	
Angel cake	1.24		21	.26		22	.27		20	.25		21	.26		20	.25		20	.25	
Chocolate cake	.92		57	.52		69	.63		57	.52		48	.44		58	.53				
Shredded wheat	1.64		33	.54		33	.54		32	.52		35	.57		33	.54				
Macaroni	.59		75	.44		72	.42		75	.44		80	.47		93	.55		70	.41	
Chicken soup	.31		190	.59		190	.59		190	.59		190	.59		190	.59		190	.59	
Roast beef	4.20								51	2.14								40	1.68	
Lamb chops	4.90																	44	2.16	
Roast chicken	5.64		55	3.10		50	2.82		40	2.26		50	2.82		50	2.82				
Fish cakes	1.62		57	.92		68	1.10		60	.97		114	1.85		112	1.81		56	.91	
Fritters	1.07		63	.67		61	.65		110	1.18		52	.56		61	.65		51	.55	
Sirup			72			72			102			63			61			35		
Butter	.10		49	.05		64	.06		38	.04		95	.10		55	.06		40	.04	
Boiled eggs	1.97																	47	.93	
Milk	.55		300	1.65		300	1.65		750	4.13		200	1.10		250	1.38				
Sugar			29			23			74			95			68					
Boiled potatoes	.25		95	.24		63	.16					80	.20		75	.19		63	.16	
Muskmelon	.14		122	.17		152	.21		108	.15		136	.19		102	.14		89	.12	
Ice cream	.50		102	.51		99	.50		122	.61		105	.53		109	.55		90	.45	
Tea	.007								450	.03		500	.04		500	.04		500	.04	
Coffee	.05		150	.08					150	.08										
Total				11.92			11.32			15.36			11.41			12.57			9.64	
July 20.																				
Bread	1.30		91	1.18		35	.46		101	1.31		142	1.85		175	2.27		133	1.73	
Rolls	1.41		50	.71		46	.65		46	.65		48	.68		98	1.38		47	.66	
Pie	.60		201	1.21		208	1.25		160	.96		182	1.09		183	1.10		93	.56	

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
July 20—Continued.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Cake	1.14		52	0.59		49	0.56		59	0.67		43	0.49		43	0.49		74	0.84	
Crackers	1.53					18	.28													
Toast	1.55		32	.50		25	.39		25	.39		21	.33		30	.47		30	.47	
Cream of wheat	.15		200	.30		200	.30					200	.30		200	.30		200	.30	
Beefsteak	5.25		53	2.78		70	3.68		77	4.04		78	4.10		64	3.36		60	3.15	
Soup	.25		191	.48		191	.48		191	.48		191	.48		191	.48		191	.48	
Chicken hash	3.28		100	3.28		117	3.84		106	3.48		98	3.21		109	3.58		55	1.80	
Butter	.10		45	.05		55	.06		64	.06		94	.09		65	.07		56	.06	
Eggs	2.12								78	1.65								75	1.59	
Milk	.51		400	2.04		175	.89		450	2.30		200	1.02		250	1.28				
Sugar			58			39			100			107			95			18		
Beets	.24		78	.19		71	.17					77	.18		75	.18				
Potatoes:																				
Mashed	.31		99	.31		106	.33		93	.29		113	.35		106	.33		121	.38	
Baked	.38					58	.22								61	.23				
Onions	.11		125	.14		84	.09		105	.12		95	.10		96	.10				
Bananas	.16					135	.22		140	.22		140	.22		134	.21		134	.21	
Peaches	.06		105	.06		105	.06		105	.06		105	.06		105	.06		105	.06	
Tea	.011		150	.02					250	.03		500	.06		500	.06		100	.01	
Coffee	.05		100	.05					100	.05										
Total				13.89			13.93			16.76			14.61			15.96			12.20	
July 21.																				
Bread	1.30		100	1.30		80	1.04		100	1.30		128	1.66		167	2.17		137	1.78	
Rolls	1.41		50	.71		47	.66		51	.72		46	.65		90	1.27		46	.65	
Cake	1.46		24	.35		26	.38					27	.39					27	.39	
Pudding	.57		232	1.32		224	1.28		220	1.25		225	1.28					230	1.31	
Force	1.98		25	.50		25	.50					25	.50		25	.50				
Roast lamb	5.25		63	3.28		80	4.20		80	4.20		53	2.78		81	4.25		62	3.26	
Gravy	.64		64	.41		68	.44		33	.21		55	.35		56	.36		55	.35	
Veal loaf	2.16		49	1.06		50	1.08		36	.78		35	.76					9	.19	
Soup	.36		190	.68		190	.68		190	.68		190	.68		190	.68		190	.68	
Hominy	.67		110	.74		105	.70		125	.84		216	1.45		242	1.62		116	.78	
Sirup			45			45			35			71			58			30		
Butter	.10		30	.03		31	.03		40	.04		62	.06		60	.06		33	.03	

Eggs	2.12					75	1.59	47	1.00	46	.98	59	1.24
Milk	.51	300	1.53	200	1.02	150	.77	350	1.79	350	1.79		
Sugar		66		86		48		115		76			
Lettuce	.08	62	.05					53	.04	63	.05		
Potatoes:													
Boiled	.25	78	.20	83	.21	71	.18	82	.21	111	.28	86	.22
German fried	.67	52	.35	45	.30	55	.37	44	.29	58	.39	51	.34
String beans	.30	84	.25	72	.22			79	.24	74	.22		
Plums	.29	40	.12	71	.21	61	.18	83	.24	68	.20	84	.24
Blackberries	.25	150	.38	150	.38			150	.38	150	.38		
Tea	.011					250	.03	250	.03			400	.04
Coffee	.05	125	.06			125	.06						
Total			13.32		13.33		13.20		14.78		15.20		11.50
July 22.													
Bread	1.30	84	1.09	96	1.25	56	.73	118	1.53	220	2.86	122	1.59
Rolls	1.41	50	.71	51	.72	53	.75	89	1.25	97	1.37	52	.73
Gingerbread	.72	35	.25	29	.21	38	.27	35	.25				
Crackers	1.53	14	.21			14	.21						
Muffins	1.22	88	1.07	86	1.05	113	1.38	87	1.06	159	1.94	145	1.77
Shredded wheat	1.62			32	.52								
Blancmange	.59	114	.67	116	.68	119	.70	130	.77				
Pot roast	6.03	50	3.02	55	3.32	45	2.71	60	3.62	58	3.50	50	3.02
Gravy	.58	49	.28	55	.32	40	.23	40	.23	43	.25	50	.29
Soup	.22	190	.42	190	.42	190	.42	190	.42	190	.42	190	.42
Omelet	1.91	96	1.83	70	1.34	70	1.34	80	1.53			78	1.49
Cheese	3.03	14	.42	14	.42	14	.42	13	.39				
Butter	.10	42	.04	84	.08	74	.07	95	.09	75	.08	58	.06
Eggs	2.12					80	1.70	82	1.74	80	1.70	81	1.72
Milk	.51	350	1.79	300	1.53	350	1.79	250	1.28	300	1.53	50	.26
Sugar		25		27		151		98		47		18	
Corn	.70	66	.46	52	.36	64	.45	65	.46	70	.49		
Potatoes:													
Mashed	.31	100	.31	105	.33	116	.36	100	.31	100	.31	105	.33
Fried	.42	78	.33	75	.32	92	.39	101	.42	94	.39	72	.30
Tomatoes	.09	133	.12	117	.11	104	.09	106	.10	101	.09	103	.09
Bananas	.16			100	.16	100	.16	100	.16	100	.16	100	.16
Tea	.011					250	.03	350	.04	250	.03	650	.07
Coffee	.05	125	.06			125	.06						
Total			13.08		13.14		14.26		15.65		15.12		13.03
July 23.													
Bread	1.30	95	1.24	72	.94	56	.73	100	1.30	173	2.25	71	.92
Rolls	1.41	52	.73	49	.69	98	1.38	50	.71	101	1.41	44	.62
Pie	.83	187	1.55	201	1.67	190	1.58	182	1.51	155	1.29		
Cake	.93	69	.64	50	.47	65	.60	82	.76	84	.78	71	.66
Crackers	1.53			14	.21								
Toast	1.55	33	.51	45	.70	35	.54	35	.54	58	.90	37	.57
Cream of wheat	.15	205	.31	205	.31	205	.31	205	.31	205	.31	205	.31

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
July 23—Continued.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Rice	0.27		110	0.30		110	0.30		110	0.30		110	0.30		110	0.30		110	0.30	
Roast beef	4.99		70	3.49		48	2.40		51	2.54		65	3.24		82	4.09		38	1.90	
Pot roast	6.03					43	2.59		50	3.02		38	2.29							
Soup	.08		171	.14		171	.14		171	.14		171	.14		171	.14		171	.14	
Butter	.10		41	.04		68	.07		80	.08		83	.08		55	.06		50	.05	
Milk	.51		350	1.79		300	1.53		350	1.79		350	1.79		300	1.53				
Sugar			72			73			105			126			116			30		
Mashed potatoes	.31		105	.33		110	.34		114	.35		115	.36		115	.35		109	.33	
Creamed potatoes	.37		170	.63		132	.49		115	.43		130	.48		195	.72		120	.44	
Oranges	.14		100	.14		100	.14		100	.14		100	.14		100	.14		100	.14	
Muskmelon	.13		106	.14		160	.21		73	.09		83	.11		100	.13		144	.19	
Tea	.011								150	.02		500	.06		500	.06		100	.01	
Coffee	.05		125	.06					125	.06								125	.06	
Total				12.04			13.20			13.79			14.12			14.46			6.64	
July 24.																				
Bread	1.30		76	.99		70	.91		45	.59		88	1.14		115	1.50		50	.65	
Rolls	1.41		53	.75		46	.65		97	1.37		97	1.37		99	1.40		48	.68	
Gingerbread	.91		50	.46					45	.41		45	.41					45	.41	
Cake	.98		62	.61					57	.56		59	.58		52	.51		97	.95	
Toast	1.55		30	.47		40	.62		40	.62		30	.47		30	.47		30	.47	
Corn flakes	1.06		27	.29		27	.29					27	.29		27	.29				
Minced meat	3.20		78	2.50		70	2.24		72	2.30		82	2.62		74	2.37				
Soup	.36		190	.68		190	.68		190	.68		190	.68		190	.68		190	.68	
Steak, cod	4.29		42	1.80		55	2.36		64	2.75		64	2.75		77	3.30		57	2.45	
Butter	.10		38	.04		58	.06		58	.06		68	.07		47	.05		55	.06	
Eggs	2.12								80	1.70					76	1.61		95	2.01	
Milk	.51		150	.77		200	1.02		450	2.30		350	1.79		300	1.53				
Sugar			54			72			135			160			117			41		
Corn	.70		57	.40		70	.49		105	.74		156	1.09		61	.43				
Mashed potatoes	.31		93	.29		126	.39		110	.34		98	.30		87	.27		88	.27	
Scalloped potatoes	.37		97	.36		115	.43		93	.34		113	.42		106	.39		90	.33	
Tomatoes	.09		105	.09		107	.10		113	.10		100	.09		112	.10		111	.10	
Peaches	.06		223	.13		223	.13		223	.13		223	.13		223	.13		223	.13	
Orange ice	.01		100	.01		100	.01		100	.01		100	.01		100	.01		100	.01	

Tea	.011								250	.03		250	.03		500	.06		250	.03	
Coffee	.05		125	.06					125	.06								125	.06	
Total				10.70			10.38			15.12			14.24			15.10			9.29	
July 25.																				
Bread	1.30		87	1.13		67	.87		75	.98		90	1.17		115	1.50		68	.88	
Rolls	1.41		49	.69		50	.71		49	.69		50	.71		97	1.37		50	.71	
Pie	.85		203	1.73		155	1.32		159	1.35		193	1.64		150	1.28				
Cake	.98		43	.42		46	.45		35	.34		45	.44		45	.44		40	.39	
Biscuits	1.17		65	.76		65	.76		137	1.60		95	1.11		60	.70		125	1.46	
Oatmeal	.36		210	.76		210	.76		210	.76		210	.76		210	.76		210	.76	
Corned beef	5.78		80	4.62		69	3.99		60	3.47		70	4.05		55	3.18		90	5.20	
Soup	.09		200	.18		200	.18		200	.18		200	.18		200	.18		200	.18	
Baked beans	1.34		120	1.61		120	1.61					220	2.95		120	1.61		220	2.95	
Butter	.10		27	.03		77	.08		80	.08		90	.09		65	.07		47	.05	
Eggs	2.12								100	2.12					85	1.80		125	2.65	
Milk	.51		200	1.02		300	1.53		450	2.30		175	.89		200	1.02				
Sugar			43			84			120			125			95			27		
Corn	.70		90	.63		90	.63		90	.63		90	.63		90	.63		90	.63	
Lima beans	.89		20	.18		20	.18		20	.18		20	.18		20	.18		20	.18	
Mashed potatoes	.31		91	.28		113	.35		125	.39		115	.36		110	.34		90	.28	
Baked potatoes	.38					75	.29								100	.38				
Huckleberries	.10		120	.12		120	.12		120	.12		120	.12		120	.12				
Tea	.011											250	.03		250	.03		400	.04	
Coffee	.05		125	.06					125	.06								125	.06	
Total				14.22			13.83			15.25			15.31			15.58			16.42	
July 26.																				
Bread	1.30		65	.85		54	.70		65	.85		105	1.37		143	1.86		38	.49	
Rolls	1.41		48	.68		48	.68		50	.71		95	1.34		99	1.40		47	.66	
Sponge cake	1.38		32	.44														29	.40	
Angel cake	1.05		24	.25		20	.21		23	.24		25	.26		25	.26		23	.24	
Toast	1.55		36	.56		30	.47		27	.42		26	.40		25	.39		30	.47	
Shredded wheat	1.62		30	.49		31	.50								32	.52				
Rice	.27		100	.27		100	.27		100	.27		100	.27		100	.27		100	.27	
Fritters	1.18		65	.77		53	.63		51	.60		58	.68		55	.65		67	.79	
Sirup			28			44			63			42			70			20		
Soup	.31		190	.59		190	.59		190	.59		190	.59		190	.59		190	.59	
Beefsteak	5.25																	76	3.99	
Chicken	4.92		105	5.17		95	4.67		105	5.17		106	5.22		70	3.44				
Gravy	.39		15	.06		15	.06		18	.07		10	.04		15	.06				
Butter	.10		29	.03		67	.07		51	.05		84	.08		65	.07		38	.04	
Eggs	2.12								90	1.91					75	1.59		80	1.70	
Milk	.51		300	1.53		450	2.30		450	2.30		300	1.53		250	1.28				
Sugar			50			59			130			125			100			19		
Ice cream	.46		105	.48		109	.50		87	.40								107	.49	
Mashed potatoes	.31		85	.26		95	.29		70	.22		107	.33		126	.39		120	.37	
Codfish cakes	1.58		56	.88		53	.84		55	.87		62	.98		100	1.58		60	.95	
Cantaloupe	.13		150	.20		138	.18		88	.11		113	.15		130	.17		119	.15	
Peaches	.061		100	.06		100	.06		100	.06		100	.06		100	.06		100	.06	

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
July 26—Continued.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Tea	0.01								250	0.03		250	0.03		500	0.06		75	0.01	
Coffee	.05		125	0.06					125	.06		125	.06					125	.06	
Total				13.63			13.02			14.93			13.39			14.64			11.73	
July 27.																				
Bread	1.30	2.43	68	.88	1.65	55	.72	1.34	66	.86	1.60	95	1.24	2.31				87	1.13	2.11
Rolls	1.41	6.26	51	.72	3.19	52	.73	3.26	53	.74	3.32	49	.69	3.07	52	.73	3.26	48	.68	3.00
Cookies	1.03	16.37	28	.29	4.58				30	.31	4.91	30	.31	4.91						
Muffins	1.22	7.58	103	1.26	7.81	87	1.06	6.59	190	2.32	14.40	99	1.21	7.50				101	1.23	7.66
Toast	1.55	2.86													60	.93	1.72			
Cream of wheat	.15	.26	170	.26	.44	170	.26	.44				170	.26	.44	170	.26	.44	170	.26	.44
Roast lamb	4.82	9.39	50	2.41	4.70	60	2.89	5.63	50	2.41	4.70	50	2.41	4.70	50	2.41	4.70	46	2.22	4.32
Corned-beef hash	.93	7.92	100	.93	7.92	100	.93	7.92	100	.93	7.92	100	.93	7.92				100	.93	7.92
Celery soup	.32	2.33	188	.60	4.38	188	.60	4.38	188	.60	4.38	188	.60	4.38	188	.60	4.38	180	.58	4.19
Custard	.92	2.18	145	1.33	3.16	145	1.33	3.16	145	1.33	3.16	145	1.33	3.16						
Butter	.10	86.48	44	.04	38.05	87	.09	75.24	86	.09	74.37	65	.07	56.21	50	.05	43.24	64	.06	55.35
Scrambled eggs	2.12	17.97							72	1.53	12.94				70	1.48	12.58	82	1.74	14.74
Milk	.51	3.91	250	1.28	9.78	300	1.53	11.73	450	2.30	17.60	200	1.02	7.82	150	.77	5.87	20	.10	.78
Sugar			45			93			121			69			62			58		
Mashed potatoes	.31	.29	100	.31	.29	135	.42	.39	110	.34	.32	93	.29	.27	110	.34	.32	114	.35	.33
Potato paté	.29	8.28	62	.18	5.13	57	.17	4.72	73	.21	6.04	57	.17	4.72				60	.17	4.97
Lima beans	.89	14.55	85	.76	12.37	87	.77	12.66	87	.77	12.66	87	.77	12.66	87	.77	12.66	87	.77	12.66
Peaches	.06	.29	155	.09	.45	155	.09	.45	155	.09	.45	155	.09	.45				155	.09	.45
Bananas	.16	.33				100	.16	.33	103	.16	.34	97	.15	.32	110	.18	.36	115	.18	.40
Watermelon	.06	.11	220	.13	.24	250	.15	.28	210	.13	.23	325	.20	.36				195	.12	.21
Tea	.011	.02							400	.04	.08	500	.06	.10	150	.02	.03	400	.04	.08
Coffee	.05	.04	125	.06	.05				125	.06	.05	125	.06	.05				125	.06	.05
Total				11.53	104.19		11.90	138.52		15.22	169.47		11.86	121.35		8.54	89.56		10.71	119.66
July 28.																				
Bread	1.30	2.43	64	.83	1.56	65	.85	1.58	65	.85	1.58	100	1.30	2.43				87	1.13	2.11
Rolls	1.41	6.26	46	.65	2.88	45	.63	2.82	48	.68	3.00	56	.79	3.51				48	.68	3.00
Huckleberry pie	.64	13.81	112	.72	15.47	92	.59	12.71	106	.68	14.64	102	.65	14.09				110	.70	1.52
Charlotte russe	.90	8.26	67	.60	5.53	117	1.05	9.66	55	.50	4.54	65	.59	5.37				61	.55	5.04

Toast	1.55	2.86	31	.48	.89	35	.54	1.00	70	1.09	2.00	70	1.09	2.00	241	3.84	6.89	50	.78	1.43
Force	1.98	1.95	20	.40	.39	20	.40	.39	.....	.....	.....	20	.40	.39	.....	.....	.....	.....	.....	.....
Hamburg steak	4.59	14.55	60	2.75	8.73	55	2.52	8.00	57	2.62	8.29	60	2.75	8.73	.....	.....	.....	60	2.75	8.73
Ham	4.20	15.22	20	.84	3.04	25	1.05	3.81	20	.84	3.04	25	1.05	3.81	.....	.....	.....	26	1.09	3.96
Vegetable soup	.41	1.44	192	.79	2.76	192	.79	2.76	192	.79	2.76	192	.79	2.76	.....	.....	.....	192	.79	2.76
Butter	.10	86.48	30	.03	25.94	74	.07	64.00	61	.06	52.75	90	.09	77.83	67	.07	57.94	47	.05	40.65
Boiled eggs	2.22	12.85	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	199	4.42	25.57	.....	.....	.....
Milk	.51	3.91	200	1.02	7.82	300	1.53	11.73	200	1.02	7.82	300	1.53	11.73	.....	.....	.....	.....	.....	.....
Sugar	.....	.....	60	.....	.....	38	.....	.....	100	.....	.....	126	.....	.....	45	.....	.....	20	.....	.....
Corn	.70	1.21	60	.42	.73	89	.62	1.08	100	.70	1.21	75	.53	.91	.....	.....	.....	.....	.....	.....
Mashed potatoes	.31	.29	100	.31	.29	100	.31	.29	100	.31	.29	100	.31	.29	.....	.....	.....	100	.31	.29
French fried potatoes	.67	10.11	30	.20	3.03	35	.23	3.54	46	.31	4.65	37	.25	3.74	.....	.....	.....	35	.23	3.54
Peaches	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29	.....	.....	.....	100	.06	.29
Watermelon	.06	.11	.....	.....	.....	133	.08	.15	180	.11	.20	275	.17	.30	.....	.....	.....	.....	.....	.....
Tea	.011	.02	125	.01	.03	.....	.....	.....	450	.05	.09	400	.04	.08	550	.06	.11	250	.03	.05
Coffee	.05	.04	125	.06	.05	.....	.....	.....	125	.06	.05	125	.06	.05	.....	.....	.....	125	.06	.05
Total	.....	.....	.....	10.17	79.23	.....	11.32	123.81	.....	10.73	107.20	.....	12.45	138.31	.....	8.39	90.51	.....	9.21	73.42
July 29.																				
Bread	1.30	2.43	157	2.04	3.82	105	1.37	2.55	80	1.04	1.94	220	2.88	5.35	217	2.82	5.27	121	1.57	2.94
Rolls	1.41	6.26	49	.69	3.07	43	.61	2.69	42	.59	2.63	49	.69	3.07	50	.71	3.13	48	.68	3.00
Custard pie	.95	9.14	130	1.24	11.88	171	1.62	15.63	150	1.43	13.71	154	1.46	14.08	.....	.....	.....	80	.76	7.31
Vanilla wafers	1.05	13.97	14	.15	1.96	14	.15	1.96	13	.14	1.82	15	.16	2.10	14	.15	1.96	.....	.....	.....
Quaker oats	.36	.58	185	.67	1.07	185	.67	1.07	185	.67	1.07	185	.67	1.07	185	.67	1.07	171	.62	.99
Roast beef	5.20	5.64	80	4.16	4.51	88	4.58	4.96	90	4.68	5.08	84	4.37	4.74	50	2.60	2.82	88	4.58	4.96
Bean soup	.21	2.92	190	.40	5.55	190	.40	5.55	190	.40	5.55	190	.40	5.55	190	.40	5.55	190	.40	5.55
Fritters	1.18	15.39	75	.89	11.54	50	.59	7.69	65	.77	10.00	65	.77	10.00	.....	.....	.....	80	.94	12.31
Maple sirup	.....	.....	25	.....	.....	30	.....	.....	30	.....	.....	30	.....	.....	.....	.....	.....	20	.....	.....
Butter	.10	86.48	45	.05	38.92	74	.07	64.00	29	.03	25.08	100	.10	86.48	62	.06	53.62	43	.04	37.19
Milk	.51	3.91	200	1.02	7.82	250	1.28	9.78	200	1.02	7.82	200	1.02	7.82	250	1.28	9.78	.....	.....	.....
Sugar	.....	.....	66	.....	.....	72	.....	.....	160	.....	.....	129	.....	.....	67	.....	.....	29	.....	.....
Lima beans	.89	14.55	85	.76	12.37	85	.76	12.37	85	.76	12.37	85	.76	12.37	85	.76	12.37	85	.76	12.37
Creamed potatoes	.37	5.17	115	.43	5.95	95	.35	4.91	95	.35	4.91	94	.35	4.86	120	.44	6.20	131	.48	6.77
Fried mashed potatoes	.31	4.54	100	.31	4.54	100	.31	4.54	100	.31	4.54	100	.31	4.54	100	.31	4.54	100	.31	4.54
Tomatoes	.09	.24	108	.10	.26	80	.07	.19	95	.09	.23	94	.08	.23	80	.07	.19	107	.10	.26
Bananas	.16	.33	.....	.....	.....	85	.14	.28	85	.14	.28	85	.14	.28	85	.14	.28	85	.14	.28
Pineapples	.07	.21	135	.09	.28	119	.08	.25	128	.09	.27	124	.09	.26	103	.07	.22	.....	.....	.....
Coffee	.05	.04	125	.06	.05	.....	.....	.....	125	.06	.05	125	.06	.05	.....	.....	.....	.....	.....	.....
Total	.....	.....	.....	13.06	113.59	.....	13.05	138.42	.....	12.57	97.35	.....	14.31	162.85	.....	10.48	107.00	.....	11.38	98.47
July 30.																				
Bread	1.30	2.43	127	1.65	3.09	101	1.31	2.45	89	1.16	2.16	102	1.33	2.48	131	1.70	3.18	67	0.87	1.63
Rolls	1.41	6.26	50	.71	3.13	51	.72	3.19	50	.71	3.13	49	.69	3.07	99	1.40	6.20	54	.76	3.38
Sugar cookies	1.02	15.29	36	.37	5.50	26	.27	3.98	30	.31	4.59	32	.33	4.89	34	.35	5.20	33	.34	5.05
Gingerbread	.91	9.02	79	.72	7.13	100	.91	9.02	101	.92	9.11	99	.91	8.93	.....	.....	.....	91	1.28	8.21
Muffins	1.22	12.46	106	1.29	13.21	105	1.28	13.08	171	2.09	21.31	108	1.32	13.46	108	1.32	13.46	149	1.82	18.57
Shredded wheat	1.62	1.70	35	.57	.60	34	.55	.58	34	.55	.58	34	.55	.58	34	.55	.58	.....	.....	.....
Steak	4.91	9.46	80	3.93	7.57	70	3.44	6.62	48	2.36	4.54	74	3.63	7.00	73	3.58	6.91	71	3.49	6.72

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
July 30—Continued.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Lamb soup	0.26	1.56	102	0.27	1.59	102	0.27	1.59	102	0.27	1.59	102	0.27	1.59	102	0.27	1.59	102	0.27	1.59
Cream cheese	3.03	30.95				12	.36	3.71	12	.36	3.71	12	.36	3.71				12	.36	3.71
Butter	.10	86.48	64	.06	55.35	146	.15	126.26	134	.13	115.88	114	.11	98.59	99	.10	85.62	58	.06	50.16
Scrambled eggs	2.12	15.43	84	1.78	12.96	88	1.87	13.58	77	1.63	11.88	79	1.67	12.19	77	1.63	11.88	69	1.46	10.65
Milk	.51	3.91	325	1.66	12.71	300	1.53	11.73	350	1.79	13.68	300	1.53	11.73	300	1.53	11.73			
Sugar			52			34			145			118			100			19		
Mashed potatoes	.31	.29	110	.34	.32	100	.31	.29	157	.49	.46	110	.34	.32	123	.38	.36	105	.33	.30
Baked potatoes	.38	.29	66	.25	.19	52	.20	.15							139	.53	.40			
Stewed tomatoes	.23	2.70	100	.23	2.70	100	.23	2.70	100	.23	2.70	100	.23	2.70	100	.23	2.70	100	.23	2.70
Peaches	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29
Ice cream	.49	6.01	115	.56	6.91	112	.55	6.73	117	.57	7.03	116	.57	6.97	115	.56	6.91	119	.58	7.15
Tea	.011	.02							350	.04	.07	450	.05	.09	450	.05	.09	250	.03	.05
Coffee	.05	.04	125	.06	.05				125	.06	.05	125	.06	.05						
Total				14.51	133.30		14.01	205.95		13.73	202.76		14.01	178.64		14.24	157.10		11.94	120.16
July 31.																				
Bread	1.30	2.43	70	.91	1.70	91	1.18	2.21	96	1.25	2.33	138	1.79	3.35	224	2.91	5.44	125	1.63	3.04
Rolls	1.41	6.26	47	.66	2.94	49	.69	3.07	22	.31	1.38	40	.56	2.50	98	1.38	6.13	47	.66	2.94
Butter-cream cake	.73	13.80	43	.31	5.93				45	.33	6.21	45	.33	6.21	42	.31	5.80			
Oatmeal	.36	.58	222	.80	1.29	211	.76	1.22	210	.76	1.22	220	.79	1.28	166	.60	.96	227	.82	1.32
Fried mush	.43	14.11	122	.52	17.21	135	.58	19.05	122	.52	17.21	135	.58	19.05	125	.54	17.64	113	.49	15.94
Sirup			67			55			77			62			58			22		
Veal loaf	1.76	14.99	33	.58	4.95	35	.62	5.25	35	.62	5.25	43	.76	6.05						
Beef soup	.20	1.57	176	.35	2.76	176	.35	2.76	176	.35	2.76	176	.35	2.76	176	.35	2.76	176	.35	2.76
Bluefish	3.61	8.90	105	3.79	9.35	102	3.68	9.08	69	2.49	6.14	99	3.57	8.81	77	2.78	6.85	92	3.32	8.19
Cottage pudding	1.00	11.69	74	.74	8.65				72	.72	8.42	79	.79	9.24				73	.73	8.53
Wine sauce	.04	21.18	51	.02	10.80				65	.03	13.77	44	.02	9.32				63	.03	13.34
Butter	.10	86.48	35	.04	30.27	71	.07	61.40	45	.05	38.92	86	.09	74.37	96	.10	82.02	62	.06	53.62
Milk	.51	3.91	300	1.53	11.73	250	1.28	9.78	250	1.28	9.78	150	.77	5.87	250	1.28	9.78			
Sugar			37			72			139			164			64			50		
Squash	.16	3.40	74	.12	2.52	99	.16	3.37				103	.16	3.50	80	.13	2.72			
Mashed potatoes	.31	.29	121	.38	.35	102	.32	.30	127	.39	.37	101	.31	.29	102	.32	.30	115	.36	.33
Creamed potatoes	.37	5.17	100	.37	5.17	116	.43	6.00	105	.39	5.43	107	.40	5.53	97	.36	5.02	123	.46	6.36
Bananas	.16	.33				85	.14	.28	85	.14	.28	85	.14	.28	85	.14	.28	85	.14	.28
Peaches	.06	.29	134	.08	.39	130	.08	.38	130	.08	.38	130	.08	.38	130	.08	.38	130	.08	.38

Tea	.011	.02							250	.03	.05	700	.08	.14						
Coffee	.05	.04	125	.06	.05				125	.06	.05	125	.06	.05				125	.06	.05
Total				11.26	116.06		10.34	124.15		9.80	119.95		11.63	158.98		11.28	146.08		9.19	117.08
August 1.																				
Bread	1.30	2.43	70	.91	1.70	68	.89	1.65	180	1.40	2.62	154	2.00	3.74	190	2.47	4.62	98	1.27	2.38
Rolls	1.41	6.26	48	.68	3.00	46	.65	2.88	50	.71	3.13	57	.80	3.57	106	1.49	6.64	46	.65	2.88
Apple pie	.37	11.50	148	.55	17.02	146	.54	16.79	143	.53	16.45	140	.52	16.10	138	.51	15.87	148	.55	17.02
Gingerbread	.97	9.02	37	.36	3.34										47	.46	4.24			
Biscuits	1.15	18.84	32	.37	6.03	62	.71	11.68	124	1.43	23.36	89	1.02	16.77	78	.90	14.70	118	1.36	22.23
Force	1.98	1.95	20	.40	.39	20	.40	.39				20	.40	.39	20	.40	.39			
Roast beef	5.10	10.30	60	3.06	6.18	58	2.96	5.97	60	3.06	6.18	60	3.06	6.18	54	2.75	5.56	53	2.70	5.46
Rice soup	.08	1.92	195	.16	3.74	195	.16	3.74	195	.16	3.74	195	.16	3.74	195	.16	3.74			
Baked beans	1.31	2.40	100	1.31	2.40	100	1.31	2.40	100	1.31	2.40	100	1.31	2.40	100	1.31	2.40	205	2.69	4.92
Cheese	4.82	40.36				12	.58	4.84	13	.63	5.25	10	.48	4.03				8	.39	3.23
Butter	.10	86.48	49	.05	42.38	68	.07	58.81	89	.09	76.97	102	.10	87.21	87	.09	75.24	56	.06	48.43
Milk	.51	3.91	300	1.53	11.73	300	1.53	11.73	150	.77	5.87	300	1.53	11.73	200	1.02	7.82			
Sugar			67			71			111			121			41			26		
Corn	.70	1.21	116	.81	1.40	93	.65	1.13	104	.73	1.26	66	.46	.80	116	.81	1.40	87	.61	1.05
Mashed potatoes	.31	1.82	145	.45	2.64	128	.40	2.33	130	.40	2.37	125	.39	2.28	111	.34	2.02	112	.35	2.04
Potato chips	.84	47.33	20	.17	9.47	25	.21	11.83	35	.13	16.57	25	.21	11.83	25	.21	11.83	15	.13	7.10
Peaches	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29	100	.06	.29
Blueberries	.07	.43	100	.07	.43	100	.07	.43				100	.07	.43						
Tea	.011	.02							250	.03	.05	250	.03	.05				250	.03	.05
Coffee	.05	.04	125	.06	.05				125	.06	.05	125	.06	.05						
Total				11.00	112.19		11.19	136.89		11.50	166.56		12.66	171.59		12.98	156.76		10.85	117.08
August 2.																				
Bread	1.30	2.43	60	.78	1.46	73	.95	1.77	23	.30	.56	128	1.66	3.11	130	1.69	3.16	58	.75	1.41
Rolls	1.41	6.26	48	.68	3.00	47	.66	2.94	53	.75	3.32	48	.68	3.00	44	.62	2.75	12	.17	.75
Butter cake	.72	14.25	48	.35	6.84				44	.32	6.27	35	.25	4.99	42	.30	5.99			
Toast	1.55	2.86	63	.98	1.80	77	1.19	2.20	54	.84	1.54				36	.56	1.03	45	.70	1.29
Corn flakes	1.06	.48	20	.21	.10	20	.21	.10	20	.21	.10	20	.21	.10	20	.21	.10			
Rice	.27	.10	120	.32	.12	120	.32	.12	120	.32	.12	120	.32	.12	120	.32	.12	120	.32	.12
Roast beef	5.10	5.64							50	2.55	2.82	42	2.14	2.37				50	2.55	2.82
Lamb chops	4.50	10.17																61	2.75	6.20
Fritters	1.18	16.36	55	.65	9.00	60	.71	9.82	60	.71	9.82	68	.80	11.12				53	.63	8.67
Sirup			30			40			90			30						20		
Chicken	4.21	6.15	81	3.41	4.98	77	3.24	4.74	75	3.16	4.61	73	3.07	4.49	48	2.02	2.95			
Chicken gravy	.34	6.29	53	.18	3.33	49	.17	3.08	53	.18	3.33	37	.13	2.33	50	.17	3.15			
Chicken broth	.20	.82	194	.39	1.59	194	.39	1.59	194	.39	1.59	194	.39	1.59	194	.39	1.59			
Butter	.10	86.48	46	.05	39.78	89	.09	76.97	60	.06	51.89	60	.06	51.89	54	.05	46.70	28	.03	24.21
Boiled eggs	2.22	10.17				72	1.60	7.32	70	1.55	7.12	80	1.78	8.14	88	1.95	8.95	55	1.22	5.59
Milk	.51	3.91	300	1.53	11.73	300	1.53	11.73	250	1.28	9.78	200	1.02	7.82	400	2.04	15.64			
Sugar			62			142			125			126			66					
Mashed potatoes	.31	1.82	121	.38	2.20	101	.31	1.84	100	.31	1.82	113	.35	2.06	104	.32	1.89	95	.29	1.73
Cantaloupe	.13	.32	106	.14	.34	99	.13	.32	86	.11	.28	108	.14	.35	96	.12	.31	123	.16	.39
Watermelon	.07	.11	352	.25	.39	402	.28	.44	189	.13	.21	438	.31	.48	228	.16	.25	146	.10	.16

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
August 2—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Ice cream	0.38	4.51	104	0.40	4.69	103	0.39	4.65	97	[illegible]	4.37							103	0.39	4.65
Tea	.011	.02	125	.01	.03				400	.04	.08	150	0.02	0.03	250	0.03	0.05	100	.01	.02
Coffee	.05	.04	125	.06	.05				125	.06	.05	125	.06	.05				125	.06	.05
Total				10.77	91.43		12.17	129.63		13.64	109.68		13.39	104.04		10.95	94.63		10.13	58.06
August 3.																				
Bread	1.30		97	1.26		74	.96		55	.72		158	2.05		158	2.05		71	.92	
Rolls	1.41		44	.62		45	.63		49	.69		48	.68		98	1.38		49	.69	
Pie	.51		127	.65		145	.74		140	.71		105	.54		137	.70		113	.58	
Cake	1.12		43	.48		38	.43		37	.41		37	.41		33	.37				
Muffins	1.22		112	1.37		45	.55		165	2.01		51	.62		202	2.46		119	1.45	
Fudge	.51		62	.32		48	.24		41	.21		49	.25		37	.19				
Cream of wheat	.15		237	.36		235	.35		112	.17		210	.32		233	.35		222	.33	
Roast lamb	5.44		45	2.45		55	2.99		47	2.56		55	2.99		38	2.07		45	2.45	
Soup	.25		213	.53		213	.53		213	.53		213	.53		213	.53		213	.53	
Hash	3.57		70	2.50		76	2.71		70	2.50		71	2.53					73	2.61	
Butter	.10		45	.05		60	.06		81	.08		81	.08		84	.08		45	.05	
Milk	.51		250	1.28		200	1.02		200	1.02		200	1.02		275	1.40				
Sugar			44			90			180			127			93			50		
Corn	.46		88	.40		88	.40		88	.40		88	.40		88	.40		88	.40	
Lima beans	.94		42	.39		42	.39		42	.39		42	.39		42	.39		42	.39	
Mashed potatoes	.31		148	.46		140	.43		134	.42		99	.31		100	.31		108	.33	
Hashed potatoes	.46		72	.33					85	.39		100	.46		69	.32		63	.29	
Tomatoes	.13		100	.13		100	.13		108	.14		98	.13		95	.12		111	.14	
Peaches	.06		100	.06		100	.06		100	.06		100	.06		100	.06		100	.06	
Bananas	.16					89	.14		104	.17		106	.17		89	.14		118	.19	
Tea	.011								250	.03		250	.03		350	.04		250	.03	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				13.70			12.76			13.67			14.03			13.36			11.50	
August 4.																				
Bread	1.30		90	1.17					68	.88		120	1.56		178	2.31		68	.88	
Rolls	1.41		51	.72					51	.72		94	1.33		92	1.30		50	.71	

Peach shortcake	.44		186	.82					194	.85		152	.67					193	.85	
Charlotte russe	.72		82	.59		69	.50		71	.51		67	.48		69	.50		67	.48	
Force	1.98		20	.39		20	.39		20	.39		20	.39		20	.39				
Rice	.27		130	.35					130	.35		130	.35		130	.35		130	.35	
Toast	1.55		45	.70					40	.62		76	1.18		33	.51		37	.57	
Beefsteak	4.81		70	3.37					93	4.47		79	3.80		74	3.56		66	3.17	
Ham	4.09								63	2.58		36	1.47							
Soup	.33		183	.60		183	.60		183	.60		183	.60		183	.60		183	.60	
Butter	.10		46	.05					66	.07		98	.10		71	.07		46	.05	
Milk	.51		225	1.15		200	1.02		250	1.28		250	1.28		300	1.53				
Sugar			37			24			134			110			64					
Creamed potatoes	.37		117	.43					137	.51		113	.42		128	.47		117	.43	
Hashed potatoes	.46		100	.46		100	.46		100	.46		100	.46		100	.46		100	.46	
Cantaloupe	.13		77	.10		76	.10		71	.09		74	.10		99	.13		141	.18	
Tea	.011								350	.04		250	.03		250	.03		150	.02	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				10.96			3.07			14.48			14.28			12.21			8.81	
August 5.																				
Bread	1.30		159	2.07		59	.77		101	1.31		268	3.48		234	3.04		138	1.79	
Rolls	1.41		48	.68					49	.69		100	1.41		87	1.23		46	.65	
Orange ice	.01		120	.02		116	.02		120	.02		98	.01		93	.01		86	.01	
Silver cake	.61		48	.29		40	.24		32	.20		39	.24		28	.17				
Sponge cake	1.22		42	.51					120	1.46		46	.56		39	.48		84	1.02	
Oatmeal	.36		150	.54		150	.54		150	.54		150	.54		150	.54		200	.72	
Roast beef	4.86		57	2.77		23	1.12		67	3.26		58	2.82		57	2.77		85	4.13	
Minced meat	3.12		81	2.53					100	3.12		97	3.03					102	3.18	
Soup	.16		195	.31		195	.31		195	.31		195	.31		195	.31		195	.31	
Butter	.10		37	.04		21	.02		63	.06		92	.09		89	.09		57	.06	
Milk	.51		300	1.53		275	1.40		250	1.28		200	1.02		350	1.79				
Sugar						64									83			53		
Lima beans	.94		100	.94		100	.94		100	.94		100	.94		100	.94		100	.94	
Boiled potatoes	.25		110	.28		26	.07		130	.33		102	.26		96	.24		95	.24	
Baked potatoes	.38											74	.28		155	.59				
Lettuce	.08											39	.03		33	.03				
Tomatoes	.13		106	.14		115	.15		123	.16		112	.15		103	.13		85	.11	
Bananas	.16					106	.17		107	.17		102	.16		106	.17		113	.18	
Blueberries	.07		100	.07		100	.07		100	.07		100	.07		100	.07				
Tea	.011								250	.03		250	.03							
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				12.78			5.82			14.01			15.49			12.60			13.40	
August 6.																				
Bread	1.30		127	1.65		52	.68		54	.70		168	2.18		151	1.96		77	1.00	
Rolls	1.41		50	.71					88	1.24		90	1.27		98	1.38		45	.63	
Muffins	1.36		98	1.34		100	1.36		137	1.86		80	1.09		144	1.96		127	1.73	
Pie	.50		117	.59					138	.69		156	.78		126	.63		158	.79	
Cookies	.91		27	.25		27	.25		27	.25		26	.24		23	.21				
Shredded wheat	1.62		33	.53		32	.52					35	.57		31	.50				

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
August 6—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Pot roast	6.12		53	3.24		54	3.30		63	3.86		70	4.28		55	3.37		37	2.26	
Gravy	.58		29	.17		25	.15		29	.17		30	.17		26	.15		28	.16	
Soup	.18		195	.35		195	.35		195	.35		195	.35		195	.35		195	.35	
Cheese	4.04								17	.69		19	.77					18	.73	
Butter	.10		47	.05		61	.06		94	.09		96	.10		75	.08		51	.05	
Eggs	2.22		73	1.62		77	1.71		79	1.75		73	1.62		77	1.72		74	1.64	
Cream dressing	.43		44	.19		33	.14		36	.15		27	.12		38	.16		32	.14	
Milk	.51		150	.77		250	1.28		150	.77		150	.77		250	1.28				
Sugar			29			60			97						79					
Mashed potatoes	.31		120	.37		83	.26		98	.30		125	.39		111	.34		108	.33	
French fried potatoes	.67		57	.38		45	.30		60	.40		65	.44		60	.40		60	.40	
Beets	.17		95	.16								102	.17		104	.18				
Huckleberries	.10					100	.10													
Bananas	.16								100	.16										
Pineapple	.08		85	.07		64	.05		85	.07		85	.07		85	.07				
Cantaloupe	.14		97	.14								159	.21		154	.20		173	.22	
Tea	.011								250	.03		500	.06		500	.06		350	.04	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				12.64			10.51			13.59			15.71			15.00			10.53	
August 7.																				
Bread	1.30		89	1.16		61	.79		51	.66		173	2.25		162	2.11		60	.78	
Rolls	1.41		49	.69					49	.69		98	1.38		94	1.33		49	.69	
Cake	.89		47	.42		48	.43					49	.44		54	.48		43	.38	
Biscuits	1.19		109	1.30		69	.82		83	.99		69	.82		65	.77		71	.84	
Oatmeal	.36		130	.47		130	.47		130	.47		130	.47		130	.47		130	.47	
Cake	1.04		60	.62		50	.52		57	.59		50	.52		47	.49		53	.55	
Wine sauce	.03		40	.01		37	.01		33	.01		40	.01		33	.01		28	.01	
Pot roast	6.12					33	2.02		47	2.88		38	2.33					32	1.96	
Mackerel	3.31		73	2.42		61	2.02		28	.93		86	2.85		75	2.48		86	2.85	
Soup	.19		193	.37		193	.37					193	.37		193	.37		193	.37	
Milk	.51		200	1.02		200	1.02		150	.77		100	.51		200	1.02				
Butter	.10		47	.05		59	.06		87	.09		90	.09		74	.07		48	.05	
Sugar			60			39			167			106			62			34		
Mashed potatoes	.31		110	.34		125	.39		100	.31		94	.29		108	.33		105	.33	

Creamed potatoes	.37		100	.37		100	.37		100	.37		100	.37		100	.37		100	.37
Stewed tomatoes	.23		101	.23		101	.23		101	.23		101	.23		101	.23			
Sliced tomatoes	.13		99	.13		119	.15		101	.13		111	.14		108	.14			
Bananas	.16					77	.12		77	.12		77	.12		76	.12		77	.12
Cream	.36					45	.16		36	.13		43	.15		43	.15		36	.13
Oranges	.12		105	.13		101	.12		97	.12		94	.11		107	.13		103	.12
Tea	.011								250	.03		250	.03		250	.03		100	.01
Coffee	.05																	125	.06
Total				9.73			10.07			9.52			13.48			11.10			10.09
August 8.																			
Bread	1.31		99	1.29		55	.72		26	.34		152	1.98		158	2.05		66	.86
Rolls	1.41		43	.61		42	.59		44	.62		89	1.25		93	1.31		45	.63
Pie	.41		151	.62		147	.60		162	.66		148	.61		127	.52		156	.64
Cake	.73		44	.32		42	.31		50	.37		40	.29		46	.34			
Toast	1.55		46	.71		52	.81		44	.68		21	.33		33	.51		37	.57
Force	1.98		20	.40		20	.40		20	.40		20	.40		20	.40			
Soup	.15		183	.27		183	.27		183	.27		183	.27		183	.27		183	.27
Corned beef	4.96		57	2.83		54	2.68		74	3.67		57	2.83		50	2.48		51	2.53
Baked beans	1.13		110	1.24		110	1.24		110	1.24		110	1.24		110	1.24		110	1.24
Cheese	4.04								31	1.25		17	.69					16	.65
Butter	.10		61	.06		88	.09		56	.06		71	.07		87	.09		48	.05
Milk	.51		300	1.53		250	1.28		250	1.28		150	.77		350	1.79		100	.51
Sugar			81			89						112			43			7	
Corn	.70		116	.81		48	.34					114	.80		143	1.00		162	1.13
Potatoes:																			
Mashed	.31		109	.34		87	.27					93	.29		80	.25		104	.32
Hashed	.46		85	.39		65	.30		50	.23		75	.35		78	.36		76	.35
Cabbage	.25		93	.23					109	.27		95	.24		97	.24			
Blueberries	.07		110	.08															
Blackberries	.21		100	.21		100	.21		100	.21		100	.21		100	.21			
Bananas	.16					75	.12		75	.12		75	.12		75	.12		75	.12
Tea	.011								250	.03		250	.03					150	.02
Coffee	.05		125	.06					125	.06		125	.06					125	.06
Total				12.00			10.66			11.76			12.83			13.18			9.95
August 9.																			
Bread	1.30		80	1.04		81	1.05		59	.77		152	1.98		209	2.72		115	1.50
Rolls	1.41		45	.63		39	.55		46	.65		94	1.33		89	1.25			
Cocoanut cake	.80		73	.58		22	.18		82	.66		78	.62		57	.46		53	.42
Cup cakes	.73														45	.33		43	.31
Corn flakes	1.06		20	.21		20	.21		20	.21		20	.21		20	.21			
Rice	.27		128	.35		135	.36		107	.29		114	.31					159	.43
Corned beef	4.96		30	1.49		39	1.93		34	1.69		31	1.54		59	2.93		46	2.28
Beefsteak	5.38																	76	4.09
Chicken	4.85		38	1.84		57	2.76		70	3.40		61	2.96		46	2.23			
Gravy	.31		42	.13		40	.12		39	.12		37	.11		24	.07			
Soup	.23		203	.47		203	.47		203	.47		203	.47		203	.47		203	.47
Butter	.11		35	.04		71	.07		49	.05		69	.07		70	.07		38	.04

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
August 9—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Sugar			57			67			137			133			50			16		
Milk	0.51		400	2.04		300	1.53		250	1.28		200	1.02		350	1.79				
Ice cream	.56		106	.59		111	.62		80	.45		85	.48		94	.53		100	0.56	
Tomatoes	.13		120	.16		115	.15		128	.17		122	.16		115	.15		127	.17	
Mashed potatoes	.31		119	.37		112	.35		111	.34		106	.32		90	.28		115	.36	
Codfish cakes	1.60		68	1.09		75	1.20		65	1.04		64	1.02							
Muskmelon	.13		168	.22		244	.32		169	.22		229	.30		120	.16		110	.14	
Peaches	.06		100	.06		100	.06		100	.06		100	.06		100	.06		100	.06	
Tea	.011								100	.01		350	.04		250	.03		100	.01	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				11.37			11.93			11.94			13.06			13.74			10.90	
August 10.																				
Bread	1.30		93	1.21		67	.87		46	.60		145	1.89		145	1.89		62	.81	
Rolls	1.41		41	.58		40	.56		48	.68		87	1.23		95	1.34		49	.69	
Custard pie	1.42		131	1.86		127	1.80		158	2.24		151	2.14		165	2.34				
Muffins	1.12		145	1.62		105	1.18		160	1.79		105	1.18		168	1.88		218	2.44	
Cream of wheat	.15		150	.23		150	.23		150	.23		150	.23		150	.23		150	.23	
Roast beef	3.83		41	1.57		51	1.95		61	2.34		68	2.60		39	1.49		38	1.46	
Tomato soup	.17		212	.36		212	.36		212	.36		212	.36		212	.36		212	.36	
Macaroni	.64		54	.35		58	.37		57	.36		50	.32		57	.36				
Minced chicken	2.50		74	1.85		73	1.83		59	1.48								75	1.88	
Blancmange	.62					114	.71					111	.69		102	.63				
Butter	.10		69	.07		91	.09		82	.08		89	.09		90	.09		68	.07	
Milk	.51		300	1.53		300	1.53		200	1.02		150	.77		350	1.79				
Sugar			24			62			121			124			47			14		
Beets	.24		82	.20		63	.15					74	.18		83	.20				
Mashed potatoes	.31		116	.36		100	.31		106	.33		110	.34		106	.33		99	.31	
Baked potatoes	.44											80	.35		126	.55				
Bananas	.16					90	.14		90	.14		90	.14		90	.14		90	.14	
Tea	.011								350	.04		350	.04		150	.02		250	.03	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				11.85			12.08			11.75			12.61			13.64			8.48	

August 11.																				
Bread	1.29		84	1.08		95	1.23		57	.74		133	1.72		162	2.09		100	1.29	
Rolls	1.41		45	.63		46	.65		49	.69		103	1.45		97	1.37		44	.62	
Charlotte russe	.72		84	.60		83	.60		81	.58		78	.56		74	.53		77	.55	
Toast	1.61		49	.79		40	.64		64	1.03		48	.77		49	.79		41	.66	
Cream of wheat	.15		115	.17		115	.17		115	.17		115	.17		115	.17		115	.17	
Rice	.23		100	.23		100	.23		100	.23		100	.23		100	.23		100	.23	
Steak	3.83		72	2.76		63	2.41		58	2.22		58	2.22		68	2.60		75	2.87	
Roast beef	3.83					32	1.23		34	1.30								39	1.49	
Bean soup	.23		191	.44		191	.44		191	.44		191	.44		191	.44		191	.44	
Bread pudding	.81		108	.87		115	.93		110	.89		120	.97					100	.81	
Butter	.10		46	.05		107	.11		78	.08		89	.09		90	.09		67	.07	
Milk	.51		400	2.04		300	1.53		250	1.29		150	.77		350	1.79				
Sugar			44			50			88			96			58			14		
Mashed potatoes	.41		113	.46		107	.44		102	.42		130	.52		118	.48		104	.43	
Baked potatoes	.46					86	.38					166	.73		177	.78				
Muskmelon	.13		74	.10		253	.33		75	.10		264	.34					290	.38	
Tea	.011								250	.03		300	.03		400	.04		100	.01	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				10.28			11.32			10.27			11.07			11.40			10.08	
August 12.																				
Bread	1.29		145	1.87		152	1.96		129	1.66		206	2.66		170	2.19		128	1.65	
Rolls	1.41		46	.65		49	.69		48	.68		98	1.38		93	1.31				
Sponge cake	1.44		31	.45		30	.43		32	.46		31	.45		30	.43		33	.48	
Loaf cake	.59		34	.20		43	.25		43	.25		42	.25		37	.23				
Oatmeal	.36		110	.40		110	.40		110	.40		110	.40		110	.40		110	.40	
Roast lamb	5.38		50	2.69		56	3.01		52	2.80		50	2.69		47	2.53		52	2.80	
Rice soup	.16		199	.32		199	.32		199	.32		199	.32		199	.32		199	.32	
Butter	.10		61	.06		95	.10		98	.10		111	.10		68	.07		49	.05	
Scrambled eggs	2.01		59	1.19		67	1.35		62	1.25		60	1.21		52	1.05		64	1.29	
Milk	.51		250	1.28		250	1.28		150	.77		100	.51		250	1.28				
Sugar			17			70			112			77			67			12		
Corn	.46		60	.28		60	.28		60	.28		60	.28		60	.28		60	.28	
Beans	.94		40	.38		40	.38		40	.38		40	.38		40	.38		40	.38	
Mashed potatoes	.31		113	.35		97	.30		100	.31		168	.52		104	.32		114	.35	
French fried potatoes	.67		47	.31		53	.36		87	.58		60	.40		118	.79		58	.39	
Tomatoes	.13		116	.15		115	.15		110	.14		113	.15		106	.14		115	.15	
Pears	.10		128	.13		83	.08		140	.14		111	.11		84	.08		70	.07	
Plums	.13					158	.21		79	.10		171	.22		77	.10				
Lemon ice	.03		75	.02		73	.02		93	.03		94	.03		77	.02		84	.02	
Tea	.011								250	.03		100	.01					100	.01	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				10.79			11.57			10.74			12.14			11.92			8.70	

Daily food chart—*Continued*.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
August 13.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Bread	1.27		76	0.97		89	1.13		18	0.23		146	1.85		158	2.01		95	1.21	
Rolls	1.41		46	.65		46	.65		45	.63		92	1.30		96	1.35		43	.61	
Apple pie	.41		117	.48		126	.52		120	.49		135	.55		144	.59		137	.56	
Chocolate cake	.88		62	.55		61	.54		56	.49		60	.53		63	.55				
Muffins	1.11		107	1.19		93	1.03		144	1.60		149	1.65		162	1.80		175	1.94	
Shredded wheat	1.64		35	.57		34	.56		35	.57		34	.56		33	.54				
Pot roast	6.09		48	2.92		49	2.98		50	3.05		47	2.86		45	2.74		47	2.86	
Gravy	.81		35	.28		26	.21		25	.20		23	.19		35	.28		28	.23	
Hash	1.66		150	2.49		145	2.41		153	2.54		130	2.16		140	2.32		158	2.62	
Vegetable soup	.15		198	.30		198	.30		198	.30		198	.30		198	.30		198	.30	
Cheese	4.04								18	.73		15	.61					17	.69	
Butter	.10		42	.04		82	.08		85	.09		118	.12		94	.09		67	.07	
Milk	.51		250	1.28		200	1.02		150	.77		100	.51		350	1.79				
Sugar			36			46			82			62			34					
Mashed potatoes	.31		102	.32		102	.32		103	.32		106	.33		89	.28		112	.35	
Squash	.20		91	.18		100	.20		100	.20		98	.20		100	.20				
Apples	.04		117	.05		76	.03		101	.04		102	.04		98	.04				
Pineapples	.08		95	.08		94	.08		93	.07		94	.08		94	.08				
Tea	.011								250	.03		100	.01					100	.01	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				12.41			12.06			12.41			13.91			14.96			11.51	
August 14.																				
Bread	1.30		137	1.78		74	.96		104	1.35		143	1.86		188	2.44		134	1.74	
Rolls	1.52					43	.65		45	.68		90	1.37		85	1.29		48	.73	
Crullers	1.20		29	.35		50	.60		57	.68		40	.48		48	.58		55	.66	
Biscuit	1.28		81	1.04		62	.79		74	.95		80	1.02		107	1.37		95	1.22	
Oatmeal	.15		371	.56		110	.17		110	.17		110	.17		110	1.17		110	.17	
Corned beef	6.13		30	1.84		25	1.53		25	1.53		25	1.53					25	1.53	
Corn soup	.25		205	.51		205	.51		205	.51		205	.51		205	.51		205	.51	
Bluefish	4.93		76	3.75		76	3.75		50	2.47		70	3.45		72	3.55		64	3.16	
Bread pudding	.91					85	.77		88	.80										
Butter	.10		75	.08		105	.11		140	.14		85	.09		99	.10		73	.07	
Milk	.51		350	1.79		250	1.28		250	1.28		150	.77		150	.77				
Sugar			49			70			188			100			92			43		

Corn	.70	108	.76	141	.99	89	.62	96	.67	86	.60	108	.76
Mashed potatoes	.31	118	.37	108	.33	101	.31	100	.31	100	.31	100	.31
Fried potatoes	.49	105	.51	100	.49	115	.56	100	.49	100	.49	106	.52
Stewed tomatoes	.22	100	.22	100	.22	100	.22	100	.22	100	.22	100	.22
Sliced tomatoes	.13	117	.15	138	.18	122	.16	117	.15	114	.15	108	.14
Bananas	.16			75	.12	75	.12	75	.12	75	.12	75	.12
Oranges	.12	127	.15	102	.12	107	.13	97	.12	83	.10	105	.13
Tea	.011					200	.02			250	.03		
Coffee	.05	125	.06			125	.06	125	.06			125	.06
Total			13.92		13.57		12.76		13.39		12.80		12.05
August 15.													
Bread	1.30	129	1.68	93	1.21	149	1.94	203	2.64	190	2.47	96	1.25
Rolls	1.41	48	.68	35	.49	47	.66	67	.94	105	1.48	49	.69
Cocoanut pie	.90	145	1.31	176	1.58	180	1.62	185	1.67	168	1.51		
Force	2.05	20	.41	20	.41	20	.41	20	.41	20	.41		
Corned beef	6.13	41	2.51	43	2.64	43	2.64	46	2.82	47	2.88	42	2.57
Cabbage	.18	96	.17	110	.20	103	.19	97	.17	105	.19		
Tomato soup	.16	195	.31	195	.31	195	.31	195	.31	195	.31	195	.31
Baked beans	1.26	189	2.38	125	1.58	125	1.58	125	1.58	125	1.58	187	2.36
Whipped cream	.36			60	.22	60	.22	60	.22	60	.22	60	.22
Butter	.10	72	.07	97	.10	106	.11	96	.10	78	.08	72	.07
Milk	.51	150	.77	100	.51	350	1.79	150	.77	200	1.02		
Sugar		56		59		72		81		39		37	
Beets	.24	98	.23	99	.24			102	.24	101	.24		
Mashed potatoes	.31	100	.31	100	.31	103	.32	107	.32	98	.29	101	.31
French fried potatoes	.67	50	.34	50	.34	50	.34	50	.34	50	.34	50	.34
Bananas	.16			75	.12	75	.12	75	.12	75	.12	75	.12
Oranges	.12	109	.13	107	.13	104	.12	103	.12	103	.12	108	.13
Tea	.011					50	.01						
Coffee	.05	125	.06			125	.06	125	.06			125	.06
Total			11.36		10.39		12.44		12.83		13.26		8.43
August 16.													
Bread	1.30	81	1.05	84	1.09	67	.87			137	1.78	70	.91
Bread rolls	1.41											48	.68
Parker House rolls	1.74							102	1.77				
French rolls	1.87	37	.69	44	.82	41	.77			75	1.40	36	.67
Vanilla wafers	1.03	14	.14	18	.19	14	.14	19	.20			16	.16
Toast	1.62	54	.87	25	.41	49	.79	47	.76	84	1.36	87	1.41
Corn flakes	1.06	20	.21	20	.21	20	.21	20	.21	20	.21		
Rice	.23	100	.23	100	.23	100	.23	100	.23	100	.23	100	.23
Lamb chops	4.13											81	3.35
Lamb broth	.17	193	.33	193	.33	193	.33	193	.33	193	.33	193	.33
Chicken	4.64	104	4.83	100	4.64	94	4.36	62	2.88	79	3.67		
Fritters	1.07	57	.61	60	.64	59	.63	53	.57			68	.73
Sirup		47		46		39		49				37	
Butter	.10	62	.06	111	.11	101	.10	59	.06	91	.09	67	.07
Milk	.51	300	1.53	350	1.79	300	1.53	200	1.02	400	2.04		

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
August 16—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Sugar			36			45			130			97			59					
Mashed potatoes	0.31		110	0.34		107	0.33					98	0.31		100	0.31		100	0.31	
Fried potatoes	.49		100	.49		100	.49		100	0.49		100	.49		100	.49		100	.49	
Tomatoes	.13		116	.15		125	.16		115	.15		112	.15		134	.17		111	.14	
Muskmelon	.10		187	.19		280	.28		75	.08		220	.22		217	.22		43	.04	
Cherry bisque ice cream	.37		93	.34		83	.32		85	.31		90	.33					73	.27	
Blancmange	.58		227	1.32		230	1.33		218	1.26		226	1.31		222	1.29		238	1.38	
Tea	.011					100	.01		100	.01		100	.01					75	.01	
Coffee	.05		125	.06					125	.06		125	.06					125	.06	
Total				13.44			13.38			12.32			10.91			13.59			11.24	
August 17.																				
Bread	1.30	2.06	62	.81	1.28	101	1.31	2.08	76	.99	1.57	121	1.57	2.49	139	1.81	2.86	107	1.39	2.20
Rolls	1.41	4.02	47	.66	1.89				44	.62	1.77	44	.62	1.77	91	1.28	3.66	46	.65	1.85
Vanilla wafers	1.05	13.74				15	.16	2.06	16	.17	2.20	16	.17	2.20	17	.18	2.43			
Muffins	1.18	12.05	261	3.08	31.45	140	1.65	16.87	269	3.17	32.41	187	2.21	22.53	213	2.51	25.67	227	2.68	27.35
Cream of wheat	.31	.19	183	.57	.35	183	.57	.35	183	.57	.35	183	.57	.35	183	.57	.35	183	.57	.35
Roast lamb	5.06	24.37	57	2.88	13.89	82	4.15	19.98	85	4.30	20.71	86	4.35	20.96	52	2.63	12.67	81	4.10	19.74
Soup	.14	4.39	200	.28	8.78	200	.28	8.78	200	.28	8.78	200	.28	8.78	200	.28	8.78	200	.28	8.78
Butter	.10	79.19	78	.08	61.77	127	.13	100.57	157	.16	124.33	82	.08	64.94	114	.11	90.28	71	.07	56.22
Milk	.50	3.38	250	1.25	8.45	300	1.50	10.14	200	1.00	6.76	150	.75	5.07	250	1.25	8.45			
Sugar			23			67			173			93			87			23		
Corn	.45	4.73	60	.27	2.84	60	.27	2.84	60	.27	2.84	60	.27	2.84	60	.27	2.84	60	.27	2.84
Beans	.99	1.62	40	.40	.65	40	.40	.65	40	.40	.65	40	.40	.65	40	.40	.65	40	.40	.65
Mashed potatoes	.27	.36	107	.29	.39	105	.28	.38	100	.27	.36	100	.27	.36	100	.27	.36	100	.27	.36
Potato chips	.75	35.22	27	.20	9.51	20	.15	7.04	27	.20	9.51	28	.21	9.86	30	.23	10.57	33	.25	11.62
Tomatoes	.13	.13	120	.16	.16	108	.14	.14	126	.16	.16	120	.16	.16	122	.16	.16			
Bananas	.16	.08				90	.14	.07	90	.14	.07	90	.14	.07	90	.14	.07	90	.14	.07
Watermelon	.06	.07	310	.19	.22	335	.20	.23				681	.41	.48	280	.17	.20	343	.21	.24
Tea	.006	.004							250	.02	.01	100	.01	.01	250	.02	.01	75	.01	.01
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				11.17	141.67		11.33	172.18		12.77	212.52		12.52	143.56		12.28	170.01		11.34	132.32

August 18.																				
Bread	1.30	2.06	90	1.17	1.85	78	1.01	1.61	61	.79	1.26	136	1.77	2.80	150	1.95	3.09	218	2.83	4.49
Rolls	1.41	4.02	45	.63	1.81	44	.62	1.77	89	1.25	3.58	92	1.30	3.70	94	1.33	3.78	48	.68	1.93
Pie	.44	11.93	158	.70	18.85	142	.62	16.94	155	.68	18.49	147	.65	17.54	176	.77	21.00	147	.65	17.54
Crullers	.97	33.98	......	....	....	......	....	....	101	.98	34.32	60	.58	20.39	47	.46	15.97	53	.51	18.01
Shredded wheat	1.63	.19	36	.59	.07	37	.60	.07	......	....	....	34	.55	.06	34	.55	.06	......	....	....
Beefsteak	4.29	14.98	56	2.40	8.39	57	2.45	8.54	54	2.32	8.09	55	2.36	8.24	43	1.84	6.44	50	2.15	7.49
Minced meat	3.68	17.07	47	1.73	8.02	56	2.06	9.56	50	1.84	8.54	55	2.02	9.39	51	1.88	8.71	52	1.91	8.88
Soup	.22	.56	112	.25	.63	112	.25	.63	112	.25	.63	112	.25	.63	......	....	....	112	.25	.63
Fritters	1.17	19.28	55	.64	10.60	57	.67	10.99	53	.62	10.22	53	.62	10.22	......	....	....	50	.59	9.64
Sirup	....	....	55	....	....	45	....	....	45	....	....	55	....	....	......	....	....	40	....	....
Butter	.10	79.19	47	.05	37.22	107	.11	84.73	86	.09	68.10	81	.08	64.14	80	.08	63.35	82	.08	64.94
Milk	.50	3.38	100	.50	3.38	100	.50	3.38	300	1.50	10.14	150	.75	5.07	200	1.00	6.76	......	....	....
Boiled onions	.14	.72	95	.13	.68	105	.15	.76	121	.17	.87	88	.12	.63	95	.13	.68	112	.16	.81
Mashed potatoes	.27	.36	110	.30	.40	110	.30	.40	110	.30	.40	115	.31	.41	121	.33	.44	110	.30	.40
Hashed potatoes	.41	7.85	118	.48	9.26	108	.44	8.48	109	.45	8.56	115	.47	9.03	109	.45	8.56	107	.44	8.40
Peaches	.10	.05	125	.13	.06	125	.13	.06	125	.13	.06	125	.13	.06	125	.13	.06	125	.13	.06
Oranges	.12	.11	101	.12	.11	106	.13	.12	101	.12	.11	100	.12	.11	103	.12	.11	98	.12	.11
Tea	.006	.004	......	....	....	......	....	....	250	.02	.01	400	.02	.02	250	.02	.01	......	....	....
Coffee	.04	.03	125	.05	.04	......	....	....	125	.05	.04	125	.05	.04	......	....	....	125	.05	.04
Sugar	....	....	......	....	....	52	....	....	112	....	....	106	....	....	66	....	....	47	....	....
Total	....	....	......	9.87	101.37	......	10.04	148.04	......	11.56	173.42	......	12.15	152.48	......	11.04	139.02	......	10.85	143.37
August 19.																				
Bread	1.30	2.06	99	1.29	2.04	51	.66	1.05	53	.69	1.09	133	1.73	2.74	141	1.83	2.90	100	1.30	2.06
Rolls	1.41	4.02	50	.71	2.01	48	.68	1.93	44	.62	1.77	94	1.33	3.78	99	1.40	3.98	44	.62	1.77
Pie	.51	8.02	150	.77	12.03	167	.85	13.39	166	.85	13.31	169	.86	13.55	......	....	....	170	.87	13.63
Cake	.67	.26	71	.48	.18	52	.35	.14	57	.38	.15	49	.33	.13	43	.29	.11	57	.38	.15
Toast	1.68	2.80	39	.66	1.09	49	.82	1.37	48	.81	1.34	38	.64	1.06	90	1.51	2.52	47	.79	1.32
Oatmeal	.40	.41	110	.44	.45	110	.44	.45	110	.44	.45	110	.44	.45	110	.44	.45	110	.44	.45
Hamburg steak	3.89	11.34	61	2.37	6.92	62	2.41	7.03	59	2.30	6.69	57	2.22	6.46	52	2.02	5.90	60	2.33	6.80
Soup	.14	1.09	208	.29	2.27	208	.29	2.27	208	.29	2.27	208	.29	2.27	208	.29	2.27	208	.29	2.27
Butter	.10	79.19	47	.05	37.22	84	.08	66.52	66	.07	52.27	92	.09	72.85	84	.08	66.52	46	.05	36.43
Eggs	2.29	11.55	56	1.28	6.47	......	....	....	55	1.26	6.35	45	1.03	5.20	51	1.17	5.89	50	1.15	5.78
Milk	.50	3.38	300	1.50	10.14	200	1.00	6.76	150	.75	5.07	100	.50	3.38	200	1.00	6.76	......	....	....
Sugar	....	....	36	....	....	25	....	....	162	....	....	82	....	....	32	....	....	19	....	....
Mashed potato	.27	.36	110	.30	.40	115	.31	.41	110	.30	.40	114	.31	.41	106	.28	.38	130	.35	.47
Potato patty	.45	7.34	61	.27	4.48	62	.28	4.55	65	.29	4.77	78	.35	5.73	56	.25	4.11	63	.28	4.62
Stewed tomatoes	.25	3.85	100	.25	3.85	100	.25	3.85	100	.25	3.85	100	.25	3.85	100	.25	3.85	100	.25	3.85
Sliced tomatoes	.13	.13	124	.16	.16	138	.18	.18	134	.17	.17	124	.16	.16	120	.16	.16	......	....	....
Muskmelon	.13	.01	173	.22	.02	215	.28	.02	109	.14	.01	212	.28	.02	192	.25	.02	212	.28	.02
Pears	.07	.11	132	.09	.15	135	.10	.15	148	.10	.16	145	.10	.16	62	.04	.07	130	.09	.14
Tea	.006	.004	......	....	....	......	....	....	100	.01	.01	100	.01	.01	......	....	....	......	....	....
Coffee	.04	.03	......	....	....	......	....	....	125	.05	.04	125	.05	.04	......	....	....	......	....	....
Total	....	....	......	11.13	89.88	......	8.98	110.07	......	9.77	100.17	......	10.97	122.25	......	11.26	105.89	......	9.53	79.81

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
August 20.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Bread	1.30	2.06	62	0.81	1.28	50	0.65	1.03	77	1.00	1.59	102	1.32	2.10	128	1.66	2.64	88	1.14	1.81
Rolls	1.41	4.02	53	.75	2.13	46	.65	1.85	50	.71	2.01	97	1.37	3.90	96	1.35	3.86	52	.73	2.09
Cake	.84	12.01	39	.33	4.68	31	.26	3.72	34	.29	4.08	44	.37	5.28	42	.35	5.04	40	.34	4.80
Muffins	1.13	13.07	202	2.28	26.40	109	1.23	14.25	172	1.94	22.48	182	2.06	23.79	198	2.24	25.88	203	2.29	26.53
Cookies	.97	11.82				21	.20	2.48	26	.25	3.07	27	.26	3.19	24	.23	2.84	18	.17	2.13
Corn flakes	1.09	.77	20	.22	.15	20	.22	.15	20	.22	.15	20	.22	.15	20	.22	.15			
Roast beef	4.00	8.33	60	2.40	5.00	76	3.14	6.33	77	3.08	6.42	90	3.60	7.50	61	2.44	5.08	94	3.76	7.83
Soup	.26	1.77	200	.52	3.54	200	.52	3.54	200	.52	3.54	200	.52	3.54	200	.52	3.54	200	.52	3.54
Butter	.10	79.19	45	.05	35.64	75	.08	59.39	109	.11	86.32	88	.09	69.69	92	.09	72.85	54	.05	42.76
Cheese	4.40	36.61				20	.88	7.32	19	.84	6.96				22	.97	8.05	21	.92	7.69
Milk	.50	3.38	300	1.50	10.14	300	1.50	10.14	200	1.00	6.76	150	.75	5.07	200	1.00	6.76			
Ice cream	.33	5.42	82	.27	4.44	88	.29	4.77	94	.31	5.09	94	.31	5.09	93	.31	5.04	95	.31	5.15
Sugar			39			32			114			83			64			20		
Boiled onions	.14	.72	112	.16	.81	112	.16	.81	112	.16	.81	112	.16	.81	112	.16	.81	112	.16	.81
Mashed potatoes	.51	2.57	120	.61	3.08	120	.61	3.08	120	.61	3.08	120	.61	3.08	120	.61	3.08	120	.61	3.08
Creamed potatoes	.38	4.03	150	.57	6.05	120	.46	4.84	120	.46	4.84	122	.46	4.92	112	.43	4.51	116	.44	4.67
Lettuce	.08	.10										29	.02	.03	36	.03	.04			
Peaches	.10	.05	120	.12	.06	120	.12	.06	120	.12	.06	120	.12	.06	120	.12	.06	120	.12	.06
Pears	.07	.11				127	.09	.14				222	.16	.24						
Tea	.006	.004							250	.02	.01	100	.01	.01				75	.01	.01
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				10.64	103.44		10.96	123.90		11.69	157.31		12.46	138.49		12.73	150.23		11.62	113.00
August 21.																				
Bread	1.30	2.06	73	.95	1.50	70	.91	1.44	66	.86	1.36	136	1.77	2.80	132	1.72	2.72	93	1.21	1.92
Rolls	1.41	4.02	46	.65	1.85	51	.72	2.05	42	.59	1.69	95	1.34	3.82	90	1.27	3.62	45	.63	1.81
Cake	.84	12.01	34	.29	4.08	32	.27	3.84	35	.29	4.20	31	.26	3.72	35	.29	4.20	31	.26	3.72
Toast	1.68	2.80	41	.69	1.15	48	.81	1.34	43	.72	1.20	46	.77	1.29	46	.77	1.29	86	1.44	2.41
Pudding	.92	7.91	50	.46	3.96	56	.52	4.43	64	.59	5.06	57	.52	4.51	59	.54	4.67	64	.59	5.06
Wine sauce	.03	16.55	50	.02	8.28	51	.02	8.44	40	.01	6.62	43	.01	7.12	41	.01	6.79	36	.01	5.96
Oatmeal	.40	.41	110	.44	.45	110	.44	.45	110	.44	.45	110	.44	.45	110	.44	.45	110	.44	.45
Soup	.13	1.09	192	.25	2.09	192	.25	2.09	192	.25	2.09	192	.25	2.09	192	.25	2.09	192	.25	2.09
Bluefish	4.25	6.85	64	2.72	4.38	62	2.64	4.25	51	2.17	3.49	63	2.68	4.32	51	2.17	3.49	60	2.55	4.11
Butter	.10	79.19	36	.04	28.51	74	.07	58.60	48	.05	38.01	70	.07	55.43	75	.08	59.39	64	.06	50.68
Eggs	2.06	14.10				45	.93	6.35	40	.82	5.64	49	1.01	6.91	53	1.09	7.47	38	.78	5.36

Milk	.50	3.38	250	1.25	8.45	350	1.75	11.83	300	1.50	10.14	200	1.00	6.76	200	1.00	6.76			
Sugar			41			66			203			81			60			49		
Corn	.44	1.03	169	.74	1.74	116	.51	1.19	172	.76	1.77	166	.73	1.71	154	.68	1.59	142	.62	1.46
Mashed potatoes	.27	.36	140	.38	.50	138	.37	.50				140	.38	.50	139	.38	.50	140	.38	.50
French fried potatoes	.73	6.92	71	.52	4.91	67	.49	4.64	51	.37	3.53	58	.42	4.01	83	.61	5.74	131	.96	9.07
Tomatoes	.13	.13	142	.18	.18	279	.36	.36	134	.17	.17	132	.17	.17	132	.17	.17			
Pears	.07	.11	114	.08	.13															
Peaches	.10	.05	110	.11	.06	110	.11	.06	110	.11	.06	110	.11	.06	110	.11	.06	110	.11	.06
Bananas	.16	.08				100	.16	.08	100	.16	.08	100	.16	.08	100	.16	.08	100	.16	.08
Tea	.006	.004							250	.02	.01									
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				9.82	72.26		11.33	111.94		9.93	85.61		12.14	105.79		11.74	111.08		10.50	94.77
August 22.																				
Bread	1.30	2.06	82	1.07	1.69	112	1.46	2.31	65	.85	1.34	156	2.03	3.21	228	2.96	4.70	177	2.30	3.65
Rolls	1.41	4.02	46	.65	1.85	48	.68	1.93	44	.62	1.77	85	1.20	3.42	139	1.96	5.59	92	1.30	8.70
Pie	.47	12.13	137	.64	16.62	132	.62	16.01	144	.68	17.47	135	.63	16.38	167	.78	20.26	122	.57	14.80
Cake	.70	10.40	34	.24	3.54				50	.35	5.20	47	.33	4.89	45	.32	4.68	51	.36	5.30
Force	2.05	1.76	20	.41	.35	20	.41	.35	20	.41	.35	20	.41	.35	20	.41	.35			
Pot roast	5.74	15.70	63	3.62	9.89	55	3.16	8.64	60	3.44	9.42	62	3.56	9.73	61	3.50	9.58	62	3.56	9.73
Gravy	.38	12.43	27	.10	3.36	22	.08	2.73	17	.06	2.11	37	.14	4.60	26	.10	3.23	30	.11	3.73
Chowder	.24	2.54	215	.52	5.46	215	.52	5.46	215	.52	5.46	215	.52	5.46	215	.52	5.46	215	.52	5.46
Baked beans	1.30	3.76	100	1.30	3.76	199	2.59	7.48	200	2.60	7.52	200	2.60	7.52	100	1.30	3.76	200	2.60	7.52
Cheese	4.40	36.61				21	.92	7.69	19	.84	6.96	21	.92	7.69	16	.70	5.86	23	1.01	8.42
Butter	.10	79.19	27	.03	21.38	89	.09	70.48	28	.03	22.17	56	.06	44.35	39	.04	30.88	57	.06	45.14
Milk	.50	3.38	150	.75	5.07	100	.50	3.38	150	.75	5.07	100	.50	3.38	100	.50	3.38			
Sugar			40			51			142			71			47			27		
Beets	.16	1.34	58	.09	.78	56	.09	.75	63	.10	.84	58	.09	.78	53	.08	.71			
Mashed potatoes	.27	.36	104	.28	.37	123	.33	.44	108	.29	.39	100	.27	.36	103	.28	.37	100	.27	.36
Hashed potatoes	.41	7.85	100	.41	7.85	107	.44	8.40	100	.41	7.85	100	.41	7.85	100	.41	7.85	100	.41	7.85
Tomatoes	.13	.13							136	.18	.18	126	.16	.16	131	.17	.17			
Pears	.07	.11	120	.09	.13	245	.17	.27	114	.08	.13	96	.07	.11	121	.09	.13			
Oranges	.12	.11	100	.12	.11	100	.12	.11	100	.12	.11	100	.12	.11	100	.12	.11	100	.12	.11
Tea	.006	.004							250	.02	.01									
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				10.37	82.25		12.18	136.43		12.40	94.39		14.07	120.39		14.24	107.07		13.24	115.81
August 23.																				
Bread	1.30	2.06	60	.78	1.24	75	.98	1.55	75	.98	1.55	130	1.69	2.68	165	2.15	3.40	93	1.21	1.92
Rolls	1.41	4.02	45	.63	1.81	49	.69	1.97	50	.71	2.01	47	2.66	1.89	85	1.20	3.42	44	.62	1.77
Cake	.97	16.86	97	.94	16.35	99	.96	16.69	94	.91	15.85	99	.96	16.69	111	1.08	18.71	104	1.01	17.53
Toast	1.68	2.80	27	.45	.76	39	.66	1.09	29	.49	.81	28	.47	.78	35	.59	.98	77	1.29	2.16
Cream of wheat	.31	.19	200	.62	.38	200	.62	.38	200	.62	.38	200	.62	.38	200	.62	.38	200	.62	.38
Rice	.25	.33	100	.25	.33	100	.25	.33	100	.25	.33	100	.25	.33	100	.25	.33	100	.25	.33
Soup	.37	.51	196	.73	1.00	196	.73	1.00	196	.73	1.00	196	.73	1.00	196	.73	1.00	196	.73	1.00
Beefsteak	4.29	14.98																86	3.69	12.88
Chicken	4.93	3.32	83	4.09	2.76	63	3.11	2.09	75	3.70	2.49	85	4.19	2.82	91	4.49	3.02			
Ice cream	.52	4.64	72	.37	3.34	95	.49	4.41	82	.43	3.80	82	.42	3.71	81	.42	3.76	75	.39	3.48
Butter	.10	79.19	31	.03	24.55	83	.08	65.73	64	.06	50.68	65	.07	51.47	92	.09	72.85	68	.07	53.85

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
August 23—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Milk	0.50	3.38	200	1.00	6.76	200	1.00	6.76	400	2.00	13.52	150	0.75	5.07	200	1.00	6.76	...	...	...
Sugar	...	...	39	...	...	63	...	...	148	...	...	92	...	...	49	...	...	42	...	...
Lettuce	.08	.10	10	.01	.01	12	.01	.01	12	.01	.01	14	.01	.01	12	.01	.01	12	0.01	0.01
Mashed potato	.27	.36	123	.33	.44	114	.31	.41	...	...	...	116	.31	.42	103	.28	.37	104	.28	.37
Potato salad	.44	3.61	110	.48	3.97	110	.48	3.97	110	.48	3.97	110	.48	3.97	110	.48	3.97	...	...	...
Muskmelon	.13	.01	138	.18	.01	164	.21	.02	115	.15	.01	156	.20	.02	133	.17	.01	84	.11	.01
Oranges	.12	.11	100	.12	.11	100	.12	.11	100	.12	.11	100	.12	.11	100	.12	.11	100	.12	.11
Tea	.006	.004	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	75	.01	.01
Coffee	.04	.03	125	.05	.04	...	...	...	125	.05	.04	125	.05	.04	...	...	...	125	.05	.04
Total	...	...	...	11.06	63.86	...	10.70	106.52	...	11.69	96.56	...	11.98	91.39	...	13.68	119.08	...	10.46	95.85
August 24.																				
Bread	1.30	...	87	1.13	...	88	1.14	...	119	1.55	...	148	1.92	...	142	1.85	...	95	1.24	...
Rolls	1.41	...	43	.61	...	17	.24	...	47	.66	...	93	1.31	...	86	1.21	...	48	.68	...
Pie	.94	...	175	1.65	...	164	1.54	...	140	1.32	...	151	1.42	...	168	1.58	...	138	1.30	...
Cake	1.25	...	36	.45	...	34	.43	...	34	.43	...	37	.46	...	37	.46	...	31	.39	...
Toast	1.68	...	30	.50	...	30	.50	...	68	1.14	...	38	.64	...	32	.54	...	76	1.28	...
Buttered milk	.47	...	90	.42	...	83	.39	...	76	.36	...	77	.36	...	76	.36	...	69	.32	...
Cream of wheat	.31	...	200	.62	...	100	.31	...	100	.31	...	200	.62	...	200	.62	...	200	.62	...
Beefsteak	4.46	...	62	2.77	...	69	3.08	...	63	2.81	...	69	3.08	...	62	2.77	...	70	3.12	...
Ham	4.31	...	25	1.08	...	32	1.38	...	32	1.38	...	30	1.29	...	...	...	...	30	1.29	...
Soup	.14	...	205	.29	...	205	.29	...	205	.29	...	205	.29	...	205	.29	...	205	.29	...
Butter	.10	...	34	.03	...	71	.07	...	58	.06	...	82	.08	...	63	.06	...	64	.06	...
Milk	.50	...	200	1.00	...	150	.75	...	250	1.25	...	150	.75	...	150	.75	...	...	...	...
Sugar	...	...	73	...	...	87	...	...	172	...	...	127	...	...	65	...	...	58	...	...
Mashed potato	.27	...	100	.27	...	106	.29	...	107	.29	...	109	.29	...	100	.27	...	129	.35	...
Baked potatoes	.35	...	...	...	...	71	.25	...	...	...	...	103	.36	...	114	.40	...	...	...	...
Tomatoes	.26	...	100	.26	...	100	.26	...	100	.26	...	100	.26	...	100	.26	...	100	.26	...
Oranges	.12	...	102	.12	...	104	.12	...	101	.12	...	108	.13	...	104	.12	...	100	.12	...
Bananas	.16	...	...	...	...	100	.16	...	100	.16	...	100	.16	...	100	.16	...	100	.16	...
Tea	.002	...	...	...	...	...	...	...	...	...	...	125	.01	...	...	...	...	...	...	...
Coffee	.04	...	125	.05	...	...	...	...	125	.05	...	125	.05	...	...	...	...	125	.05	...
Total	...	...	...	11.25	...	...	11.20	...	...	12.44	...	...	13.48	...	...	11.71	...	...	11.53	...

August 25.																				
Bread	1.30		91	1.18		84	1.09		58	0.75		132	1.72		147	1.91		121	1.57	
Rolls	1.41		46	.65		47	.66		44	.62		89	1.25		98	1.38		91	1.28	
Pudding	.47		100	.47		100	.47		100	.47		100	.47		100	.47		100	.47	
Muffins	1.17		171	2.00		68	.80		166	1.94		65	.76		219	2.56		214	2.50	
Force	2.05		20	.41		20	.41		20	.41		20	.41		20	.41				
Roast lamb	5.25		64	3.36		64	3.36		62	3.26		60	3.15		65	3.41		69	3.62	
Gravy	.47		15	.07		18	.08		13	.06		15	.07		22	.10		12	.06	
Smoked beef	4.98		20	1.00		20	1.00		20	1.00		20	1.00		20	1.00		20	1.00	
Soup	.18		196	.35					196	.35		196	.35		196	.35		196	.35	
Butter	.10		64	.06		98	.10		91	.09		81	.08		88	.09		78	.08	
Milk	.50		175	.88		150	.75		250	1.25		100	.50		150	.75				
Sugar			36			56			91			83			57			22		
Corn	.70		236	1.65		72	.50		189	1.32		167	1.17		142	.99		174	1.22	
Creamed potatoes	.35		115	.40		112	.39		115	.40		115	.40		115	.40		115	.40	
Sweet potatoes	.34		165	.56		149	.51		131	.45		119	.40		153	.34		195	.66	
Peaches	.07		100	.07		100	.07		100	.07		100	.07		100	.07		100	.07	
Watermelon	.06		315	.19					218	.13		345	.21		316	.19		209	.13	
Tea	.002																			
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				13.35			10.19			12.62			12.06			14.60			13.46	
August 26.																				
Bread	1.30		79	1.03		69	.90		69	.90		156	2.03		155	2.02		147	1.91	
Rolls	1.41		48	.68		47	.66		48	.68		89	1.25		95	1.34		92	1.30	
Pie	.44		131	.58		126	.55		125	.55		122	.54		115	.51		121	.53	
Cake	1.32		29	.38		30	.40		30	.40		36	.48		33	.44		31	.41	
Toast	1.68		50	.84		34	.57		79	1.33		63	1.06		53	.89		59	.99	
Shredded wheat	1.63		33	.54		34	.55					34	.55		32	.52				
Hamburg steak	4.08		60	2.45		67	2.73		60	2.45		60	2.45		62	2.53		60	2.45	
Soup	.19		197	.37		197	.37		197	.37		197	.37		197	.37		197	.37	
Cheese	4.34					24	1.04		23	1.00		26	1.13		27	1.17		19	.82	
Butter	.10		41	.04		89	.09		69	.07		82	.08		64	.06		60	.06	
Eggs	1.92		65	1.25		61	1.17		60	1.15		62	1.19		64	1.23		61	1.17	
Milk	.50		100	.50		200	1.00		250	1.25		100	.50		250	1.25				
Sugar			51			56			174			88			62			29		
Corn	.45		60	.27		60	.27		60	.27		60	.27		60	.27		60	.27	
Beans	.99		40	.40		40	.40		40	.40		40	.40		40	.40		40	.40	
Tomatoes	.16		98	.16		127	.20		123	.20		118	.19		136	.22		136	.22	
Hashed potatoes	.35		125	.44		105	.37		114	.40		131	.46		135	.47		127	.44	
French fried potatoes	.73		66	.48		61	.45		66	.48		74	.54		68	.50		73	.53	
Bananas	.16					91	.15		80	.13		73	.12		70	.11		73	.12	
Peaches	.07		100	.07		100	.07		100	.07		100	.07		100	.07		100	.07	
Tea	.002		125	.11					125	.01		125	.01					125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				10.54			11.94			12.16			13.74			14.37			12.12	

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
August 27.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Bread	1.30		51	0.66		94	1.22		74	0.96		199	2.59		181	2.35		122	1.59	
Rolls	1.41		49	.69		46	.65		47	.66		97	1.37		93	1.31		92	1.30	
Pie	.59		175	1.03		152	.90		171	1.01		150	.89		162	.96		158	.93	
Biscuits	1.20		74	.89		77	.92		91	1.09		81	.97		131	1.57		127	1.52	
Cream of wheat	.32		200	.64		200	.64		200	.64		200	.64		200	.64		200	.64	
Rice	.21		100	.21		100	.21		100	.21					100	.21		100	.21	
Roast beef	4.18		50	2.09		81	3.38		80	3.34		72	3.01		51	2.13		81	3.38	
Soup	.15		210	.32		210	.32		210	.32		210	.32		210	.32		210	.32	
Butter	.10		51	.05		84	.08		109	.11		89	.09		67	.07		72	.07	
Milk	.50		200	1.00		300	1.50		275	1.38		150	.75		275	1.38				
Sugar			57			58			132			86			35			23		
Mashed potatoes	.27		129	.35		119	.32		147	.40		135	.36		119	.32		139	.38	
Fried sweet potatoes	.24		128	.31		107	.26		102	.24		92	.22		115	.28		112	.27	
Apple	.02		105	.02		89	.02		101	.02		119	.02		91	.02				
Muskmelon	.13		167	.22		207	.27					204	.27		253	.33		213	.28	
Tea	.002		125	.01					125	.01		125	.01					125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				8.54			10.69			10.44			11.56			11.89			10.95	
August 28.																				
Bread	1.30		92	1.20		73	.95		129	1.68		139	1.81		159	2.07		95	1.24	
Rolls	1.41		92	1.30		46	.65		49	.69		90	1.27		138	1.95		90	1.27	
Gingerbread	.93		55	.51		46	.43		56	.52					69	.64		49	.46	
Peach custard	.52		110	.57		110	.57		110	.57		110	.57		110	.57		110	.57	
Biscuits	1.20		60	.72		56	.67		67	.80		63	.76		62	.74		81	.97	
Fried mush	.33		244	.81		290	.96		257	.85		263	.87		250	.83		205	.68	
Sirup			62			57			99			80			61			40		
Corn flakes	1.09		20	.22		20	.22		20	.22		20	.22		20	.22				
Ham	4.05					27	1.09		24	.97		28	1.13					25	1.01	
Steak, codfish	5.00		27	1.35		53	2.65		46	2.30		67	3.35		54	2.70		64	3.20	
Soup	.24		196	.47		196	.47		196	.47		196	.47		196	.47		196	.47	
Cheese	2.95					16	.47		19	.56					16	.47		18	.53	
Butter	.10		66	.07		91	.09		91	.09		82	.08		69	.07		76	.08	
Milk	.50		150	.75		100	.50		100	.50		150	.75		100	.50				

Sugar			71			36			130			80			82			14		
Beets	.24		97	.23		65	.16					65	.16		67	.16				
Mashed potatoes	.27		88	.24		108	.29		120	.32		125	.34		124	.33		168	.45	
Tomatoes	.24		119	.29		114	.27		111	.27		121	.29		110	.27		115	.28	
Tea	.002		125	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				8.79			10.44			10.87			12.13			12.00			11.27	
August 29.																				
Bread	1.30		80	1.04		79	1.03		95	1.24		126	1.64		134	1.74		110	1.43	
Rolls	1.41		90	1.27		49	.69		47	.66		90	1.27		138	1.95		89	1.25	
Pie	.40		124	.50		132	.53		127	.51		155	.62		170	.68		125	.50	
Cookies	.93					24	.22		21	.20		24	.22							
Muffins	1.06		190	2.01		178	1.89		178	1.89		168	1.79		171	1.81		195	2.07	
Oatmeal	.38		190	.72		190	.72		190	.72		190	.72		190	.72		190	.72	
Corned beef	4.73		40	1.89		48	2.27		50	2.37		50	2.37		50	2.37		50	2.37	
Soup	.34		205	.70		205	.70		205	.70		205	.70		205	.70		205	.70	
Baked beans	1.16		175	2.03		175	2.03		175	2.03		175	2.03		175	2.03		175	2.03	
Butter	.10		68	.07		140	.14		105	.11		92	.09		101	.10		80	.08	
Milk	.50		125	.63		200	1.00		200	1.00		100	.50		100	.50				
Sugar			52			53			124			95			63			27		
Corn	.49		131	.64		82	.40		151	.74		160	.78		80	.39		160	.78	
Mashed potatoes	.27		124	.33		121	.33		110	.30		115	.31		105	.28		177	.48	
Hashed potatoes	.32		65	.21		87	.28		75	.24		85	.27		95	.30				
Cabbage	.15		100	.15		101	.15		100	.15		100	.15		100	.15				
Peaches	.05		125	.06		127	.06		126	.06		126	.06					117	.06	
Plums	.13					71	.09		67	.09		80	.10		53	.07				
Tea	.002																			
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				12.30			12.53			13.06			13.67			13.79			12.52	
August 30.																				
Bread	1.30		40	.52		40	0.52		192	2.50		141	1.83		136	1.77		68	.88	
Rolls	1.41		42	.59		86	1.21		43	.61		85	1.20		130	1.83		43	.61	
Sponge cake	1.10		45	.50		37	.41		35	.39		36	.40		36	.40		38	.42	
Tea cake	1.10		48	.53								45	.50					40	.44	
Toast	1.68		36	.60		55	.92		44	.74					53	.89		88	1.48	
Shredded wheat	1.63		31	.51		34	.55		30	.49		33	.54		33	.54				
Rice	.21		95	.20		85	.18					85	.18		84	.18				
Corned beef	4.73					25	1.18		26	1.23		28	1.32					26	1.23	
Chicken	5.72		82	4.69		103	5.89		103	5.89		81	4.63		138	7.89				
Lamb chops	4.62																	69	3.19	
Soup	.11		114	.13		112	.12		115	.13		81	.09		114	.13		117	.13	
Butter	.10		42	.04		95	.10		97	.10		78	.08		72	.07		54	.05	
Milk	.50		200	1.00		100	.50		200	1.00		150	.75		150	.75				
Custard	.77		100	.77		100	.77					100	.77		100	.77		100	.77	
Ice cream	.34		125	.43		118	.40		125	.43		102	.35							
Jelly	.03					142	.04		72	.02		137	.04		95	.03				
Sugar			29			40			162			79			42			12		

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
August 30—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Sweet potatoes	0.17		105	0.18		66	0.11		77	0.13		119	0.20		69	0.12		104	0.18	
French fried potatoes	.73		44	.32		68	.50		80	.58		84	.61		77	.56		100	.73	
Tomatoes	.16		146	.23		127	.20		127	.20		146	.23		145	.23				
Plums	.13					70	.09		50	.07		59	.08		45	.06				
Bananas	.16					58	.09		121	.19		70	.11					122	.20	
Tea	.002								125	.01		125	.01							
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				11.29			13.78			14.76			13.97			16.22			10.36	
August 31.																				
Bread	1.30		47	.61		65	.85		66	.86		123	1.60		119	1.55		80	1.04	
Rolls	1.62		44	.71		45	.73		44	.71		96	1.56		92	1.49		86	1.39	
Apple pie	.71		120	.85		153	1.09		158	1.12		133	.94		153	1.09		129	.92	
Muffins	1.14		134	1.53		61	.70		185	2.11		125	1.43		268	3.06		135	1.54	
Cream of wheat	.31		190	.59		190	.59		190	.59		190	.59		190	.59		190	.59	
Pot roast	6.31		50	3.16		50	3.16		50	3.16		47	2.97		50	3.16		50	3.16	
Gravy	.66		27	.18		20	.13		24	.16		23	.15		26	.17		26	.17	
Beef soup	.12		198	.24		198	.24		198	.24		198	.24		198	.24		198	.24	
Beef hash	3.61		50	1.81		50	1.81		50	1.81		50	1.81		50	1.81		50	1.81	
Macaroni	.62		100	.62		100	.62		100	.62		100	.62		100	.62		100	.62	
Butter	.10		44	.04		104	.10		109	.11		82	.08		103	.10		76	.08	
Milk	.50		150	.75		150	.75		200	1.00		150	.75		100	.50				
Sugar			21			52			124			61			26			17		
Fried sweet potatoes	.24		119	.29		71	.17		86	.21		145	.35		93	.22		116	.28	
Creamed potatoes	.29		50	.15		53	.15		50	.15		50	.15		107	.31		54	.16	
Bananas	.16					85	.14		85	.14		85	.14		85	.14		85	.14	
Tea	.002																	125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				11.58			11.23			13.04			13.43			15.05			12.20	
September 1.																				
Bread	1.30		55	.72		81	1.05		100	1.30		148	1.92		126	1.64		108	1.40	

Rolls	1.56		44	.69		47	.73		51	.80		96	1.50		93	1.45		54	.84	
Sponge cake	1.50		29	.44		32	.48		34	.51		29	.44		35	.53		36	.54	
Toast	1.68		81	1.36		67	1.13		54	.91		56	.94		61	1.02		50	.84	
Cream of wheat	.31		205	.64		205	.64		205	.64		205	.64		205	.64		205	.64	
Steak	4.45		52	2.31		42	1.87		50	2.22		51	2.27		51	2.27		51	2.27	
Minced meat	3.57		34	1.21		35	1.25		36	1.29		40	1.43		35	1.25		30	1.07	
Beef broth	.31		211	.65		211	.65		211	.65		211	.65		211	.65		211	.65	
Cottage pudding	.98		60	.59		66	.65		57	.56		62	.61		55	.54		55	.54	
Sauce	.02		40	.01		36	.01		43	.01		38	.01		45	.01		46	.01	
Butter	.10		42	.04		112	.11		80	.08		81	.08		56	.06		65	.07	
Milk	.50		150	.75		200	1.00		200	1.00		150	.75		100	.50				
Sugar			19			74			130			170			72			28		
Mashed potatoes	.27		113	.31		112	.30		101	.27		111	.30		115	.31		124	.33	
Potato chips	.96		20	.19		20	.19		19	.18		20	.19		22	.21		16	.15	
Bananas	.16					92	.15		93	.15		99	.16		86	.14				
Apple sauce	.03		110	.03		110	.03		110	.03		110	.03		110	.03		110	.03	
Tea	.002														125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				9.99			10.24			10.65			11.97			11.26			9.44	
September 2.																				
Bread	1.30		85	1.11		74	.96		100	1.30		121	1.57		150	1.95		107	1.39	
Rolls	1.56		46	.72		47	.73		43	.67		95	1.48		43	.67		43	.67	
Custard pie	.90		155	1.40		167	1.50		167	1.50		155	1.40		167	1.50		180	1.62	
Cocoanut cake	.81		50	.41					57	.46		50	.41					56	.45	
Biscuits	1.17		87	1.02		82	.96		80	.94		81	.95		81	.95		72	.84	
Corn flakes	1.09		20	.22		20	.22		20	.22		20	.22		20	.22				
Roast lamb	4.93		59	2.91		60	2.96		59	2.91		59	2.91		60	2.96		59	2.91	
Corn soup	.16		190	.30		190	.30		190	.30		190	.30		190	.30		190	.30	
Butter	.10		53	.05		121	.12		116	.12		89	.09		81	.08		56	.06	
Scrambled eggs	1.97					50	.99		50	.99		50	.99		50	.99		50	.99	
Milk	.50		200	1.00		150	.75		225	1.13		200	1.00		250	1.25				
Sugar			52			38			157			8			65			32		
Corn	.45		60	.27		60	.27		60	.27		60	.27		60	.27		60	.27	
Beans	.99		40	.40		40	.40		40	.40		40	.40		40	.40		40	.40	
Mashed potatoes	.27		156	.42		130	.35		109	.29		126	.34		120	.32		163	.44	
Sweet potatoes	.34		132	.45		107	.36		105	.36		110	.37		107	.36		122	.41	
Tomatoes	.16		135	.22		130	.21		130	.21		146	.23		120	.19				
Muskmelon	.13		230	.30		245	.32		126	.16		225	.29		194	.25		173	.22	
Peaches	.07		107	.07		107	.07		107	.07		107	.07		107	.07		107	.07	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				11.32			11.47			12.35			13.34			12.73			11.09	
September 3.																				
Bread	1.36		91	1.24		52	.71		54	.73		142	1.93		136	1.85		122	1.66	
Rolls	1.56		44	.69		47	.73		45	.70		102	1.59		99	1.54		47	.73	
Apple pie	.52		143	.74		133	.69		140	.73		135	.70		130	.68		147	.76	
Muffins	1.14		171	1.95		113	1.29		170	1.94		176	2.01		214	2.44		175	2.00	

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
September 3—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Cream of wheat	0.31		150	0.47		150	0.47		150	0.47		150	0.47		150	0.47		200	0.62	
Roast lamb	4.93		32	1.58		34	1.68		35	1.73		31	1.53					30	1.48	
Hamburg steak	4.16		53	2.20		52	2.16		53	2.20		53	2.20		53	2.20		52	2.16	
Tomato soup	.30		193	.58		193	.58		193	.58		193	.58		193	.58		193	.58	
Cheese	3.79					20	.76		24	.91		23	.87					16	.61	
Butter	.10		66	.07		114	.11		80	.08		88	.09		100	.10		72	.07	
Milk	.52		150	.78		200	1.04		150	.78		100	.52		100	.52				
Sugar			62			33			93			80			44			25		
Beets	.24		57	.14		57	.14								56	.13				
Mashed potatoes	.27		149	.40		144	.39		102	.27		142	.38		134	.36		157	.42	
Creamed potatoes	.35		121	.42		148	.52		161	.56		125	.44		153	.54		147	.51	
Muskmelon	.13		265	.34		208	.27					154	.20		182	.24		245	.32	
Oranges	.12		93	.11		100	.12		85	.10		95	.11		88	.11				
Tea	.002		125	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				11.77			11.66			11.84			13.68			11.77			11.98	
September 4.																				
Bread	1.36		96	1.31		93	1.26		97	1.32		126	1.71		155	2.11		87	1.18	
Rolls	1.56		47	.73		47	.73		42	.66		86	1.34		85	1.33		44	.69	
Cocoanut cake	.86		45	.39		52	.45		47	.40		47	.40		40	.34				
Cookies	1.09								22	.24								45	.49	
Oatmeal	.44		165	.73		165	.73		165	.73		165	.73		165	.73		200	.88	
Rice soup	.17		195	.33		195	.33		195	.33		195	.33		195	.33		195	.33	
Beef hash	1.21		90	1.09		92	1.11		94	1.14		90	1.09		90	1.09		85	1.03	
Spanish mackerel	3.93		54	2.12		76	2.99		51	2.00		63	2.48		66	2.59		65	2.55	
Fried hominy	.42		190	.80		200	.84		200	.84		187	.79		271	1.14		83	.35	
Sirup			68			63			75			57			73					
Butter	.10		46	.05		96	.10		178	.18		87	.09		80	.08		45	.05	
Milk	.52		150	.78		200	1.04		250	1.30		150	.78		200	1.04				
Sugar			47			44			160			98			80			22		
Corn	.49		106	.52					223	1.09		122	.60		139	.68		115	.56	
Mashed potatoes	.27		104	.28		115	.31		109	.29		103	.28		111	.30		146	.39	
Baked sweet potatoes	.09		81	.07		97	.09		161	.14		225	.20		88	.08		84	.08	

Tomatoes	.26	100	.26	100	.26	100	.26	100	.26	100	.26	100	.26
Bananas	.16			100	.16	100	.16	100	.16	100	.16	100	.16
Orange ice	.01	80	.01	89	.01	89	.01	76	.01			90	.01
Tea	.002	125	.01			125	.01	125	.01	125	.01	125	.01
Coffee	.04	125	.05			125	.05	125	.05			125	.05
Total			9.53		10.41		11.15		11.31		12.27		9.07
September 5.													
Bread	1.36	83	1.13	86	1.17	87	1.18	140	1.90	129	1.75	86	1.17
Rolls	1.56	42	.66	47	.73	44	.69	101	1.58	92	1.44	45	.70
Corn bread	1.08	180	1.94	95	1.03	95	1.03	84	.91	187	2.02	169	1.83
Force	2.05	20	.41	20	.41	20	.41	20	.41	20	.41		
Roast beef	3.79	58	2.20	52	1.97	53	2.01	52	1.97	58	2.20	58	2.20
Tomato soup	.22	190	.42	190	.42	190	.42	190	.42	190	.42	190	.42
Baked beans	1.21	200	2.42	200	2.42	200	2.42	200	2.42	200	2.42	200	2.42
Bread pudding	.71	132	.94	149	1.06	126	.89	118	.84	138	.98	120	.85
Butter	.10	83	.08	163	.16	82	.08	70	.07	85	.09	78	.08
Milk	.52	250	1.30	200	1.04	275	1.43	100	.52	75	.39		
Sugar		50		18		136		63		42		17	
Beets	.24	79	.19	75	.18			63	.15	66	.16		
Mashed potatoes	.27	111	.30	100	.27	105	.28	101	.27	116	.31	137	.37
French fried potatoes	.73	60	.44	60	.44	60	.44	60	.44	60	.44	60	.44
Apples	.02	150	.03	106	.02	109	.02	124	.02	97	.02		
Peaches	.07	150	.11	142	.10	150	.11	137	.10	150	.11	150	.11
Tea	.002					125	.01						
Coffee	.04	125	.05			125	.05	125	.05			125	.05
Total			12.62		11.42		11.47		12.07		13.16		10.64
September 6.													
Bread	1.36	103	1.40	57	.78	57	.78	159	2.16	155	2.01	58	.79
Rolls	1.56	56	.87	44	.69	58	.90	93	1.45	87	1.36	40	.62
Cup cake	1.05	38	.40			47	.49			38	.40	42	.44
Chocolate cake	1.02	87	.89	87	.89	98	1.00	84	.86	66	.67	60	.61
Toast	1.68	48	.81	56	.94	91	1.53	35	.59	40	.67	44	.74
Shredded wheat	1.63	34	.55	33	.54	33	.54	32	.52	33	.54	33	.54
Rice	.21	154	.32	160	.34	158	.33	155	.33			164	.34
Roast beef	3.79			31	1.17	34	1.29	32	1.21	34	1.29	30	1.14
Beef soup	.16	193	.31	193	.31	193	.31	193	.31	193	.31	193	.31
Lamb chops	4.24											77	3.26
Chicken	4.52	97	4.38	89	4.02	96	4.34	58	2.62	80	3.62		
Butter	.10	58	.06	143	.14	132	.13	82	.08	87	.09	61	.06
Milk	.52	275	1.43	250	1.30	325	1.69	200	1.04	100	.52	75	.39
Sugar		58		61		120		83		59			
Mashed potatoes	.27	97	.26	111	.30	97	.26	108	.29	117	.32	103	.28
Sweet potatoes	.34	105	.36	89	.30	107	.36	107	.36	115	.39	138	.47
Potato salad	.39	100	.39	100	.39	100	.39	100	.39	100	.39	100	.39
Cantaloupe	.13	275	.36	309	.40	99	.13	227	.30	249	.32	70	.09
Ice cream	.35	113	.40	101	.35	93	.33						

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
September 6—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Tea	0.002		125	0.01					125	0.01		125	0.01		125	0.01				
Coffee	.04								125	.05		125	.05					125	0.05	
Total				13.20			12.86			14.86			12.57			12.91			10.52	
September 7.																				
Bread	1.36	2.57	77	1.05	1.98	83	1.13	2.13	109	1.48	2.80	135	1.84	3.47	127	1.73	3.26	95	1.29	2.44
Rolls	1.56	5.19	45	.70	2.34	45	.70	2.34	46	.72	2.39	79	1.23	4.10	91	1.42	4.72	43	.67	2.23
Shortcake	.62	17.15	195	1.21	33.44	185	1.15	31.73	186	1.15	31.90	185	1.15	31.73	210	1.30	26.02	194	1.20	33.27
Gingerbread	.96	8.39	70	.67	5.87							85	.82	7.13				89	.85	7.47
Biscuits	1.22	15.26	84	1.02	12.82	82	1.00	12.51	92	1.12	14.04	99	1.21	15.11	85	1.04	12.97	82	1.00	12.51
Oatmeal	.44	.36	120	.53	.43	120	.53	.43	120	.53	.43	120	.53	.43	120	.53	.43	120	.53	.43
Roast beef	4.45	3.83	84	3.74	3.22	84	3.74	3.22	91	4.05	3.49	86	3.83	3.30	58	2.58	2.22	85	3.78	3.26
Soup	.22	1.00	212	.47	2.12	212	.47	2.12	212	.47	2.12	212	.47	2.12	212	.47	2.12	212	.47	2.12
Butter	.08	84.58	89	.07	75.28	131	.10	110.80	96	.08	81.20	113	.09	95.58	71	.06	60.05	67	.05	56.67
Milk	.52	3.94	150	.78	5.91	250	1.30	9.85	250	1.30	9.85	150	.78	5.91	125	.65	4.93			
Sugar			65			34			146			84			71			28		
Mashed potatoes	.27	.55	103	.28	.57	106	.29	.58	103	.28	.57	100	.27	.55	100	.27	.55	130	.35	.72
Potato chips	1.02	25.89	25	.26	6.47	25	.26	6.47	29	.30	7.51	19	.19	4.92	23	.23	5.95	19	.19	4.92
Stewed tomatoes	.26	1.95	100	.26	1.95	100	.26	1.95	100	.26	1.95	100	.26	1.95	100	.26	1.95	100	.26	1.95
Fried tomatoes	.39	4.80	117	.46	5.62	114	.44	5.47	112	.44	5.38	130	.51	6.24	112	.44	5.38	114	.44	5.47
Bananas	.16	.14				100	.16	.14	100	.16	.14	100	.16	.14	100	.16	.14	100	.16	.14
Tea	.002	.02	125	.01	.03				125	.01	.03	125	.01	.03	125	.01	.03	125	.01	.03
Coffee	.04	.04	125	.05	.05				125	.05	.05	125	.05	.05				125	.05	.05
Total				11.56	158.10		11.53	189.74		12.40	163.85		13.40	182.76		11.15	140.72		11.30	133.68
September 8.																				
Bread	1.36	2.57	94	1.28	2.42	83	1.13	2.13	101	1.37	2.60	156	2.12	4.01	49	.67	1.26	118	1.60	3.03
Rolls	1.56	5.19	43	.67	2.23	40	.62	2.08	41	.64	2.13	83	1.29	4.31	83	1.29	4.31	40	.62	2.08
Pie	.46	9.01	122	.56	10.99	137	.63	12.34	181	.83	16.31	160	.74	14.42				158	.73	14.24
Cake	.61	7.98				64	.39	5.11				44	.27	3.51	52	.32	4.15	54	.33	4.31
Muffins	1.12	9.89	56	.63	5.54	69	.77	6.82	200	2.24	19.78	179	2.00	17.70	169	1.89	16.71	153	1.71	15.13
Force	1.95	1.48	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30

Roast lamb	5.47	11.11	52	2.84	5.78	53	2.90	5.89	59	3.23	6.55	57	3.12	6.33	55	3.01	6.11	54	2.95	6.00
Hash	1.50	9.40	100	1.50	9.40	100	1.50	9.40	100	1.50	9.40	100	1.50	9.40	100	1.50	9.40	100	1.50	9.40
Soup	.27	.94	203	.55	1.91	203	.55	1.91	203	.55	1.91	203	.55	1.91	203	.55	1.91	203	.55	1.91
Butter	.08	84.58	120	.10	101.50	126	.10	106.57	134	.11	113.34	96	.08	81.20	100	.08	84.58	59	.05	49.90
Milk	.52	3.94	150	.78	5.91	250	1.30	9.85	150	.78	5.91	125	.65	4.93	100	.52	3.94	75	.39	2.96
Sugar	....	....	72	....	....	45	....	....	94	....	....	86	....	....	61	....	....	44	....	....
Lima beans	.96	3.99	115	1.10	4.59	115	1.10	4.59	115	1.10	4.59	115	1.10	4.59	115	1.10	4.59	115	1.10	4.59
Mashed potatoes	.27	.55	134	.36	.74	129	.35	.71	121	.33	.67	121	.33	.67	116	.31	.64	139	.38	.76
Cucumbers	.07	.11	65	.05	.07	65	.05	.07	65	.05	.07	65	.05	.07	65	.05	.07	......	....	....
Oranges	.12	.14	120	.14	.17	105	.13	.15	121	.15	.17	103	.12	.14	113	.14	.16	120	.14	.17
Peaches	.07	.03	......	....	....	137	.10	.04	......	....	....	122	.09	.04	122	.09	.04	120	.08	.04
Tea	.002	.02	125	.01	.03	......	....	....	125	.01	.03	......	....	....	125	.01	.03	......	....	....
Coffee	.04	.04	125	.05	.05	......	....	....	125	.05	.05	125	.05	.05	......	....	....	125	.05	.05
Total	....	....	......	11.01	151.63	......	12.01	167.96	......	13.33	183.81	......	14.45	153.58	......	11.92	138.20	......	12.57	114.87
September 9.																				
Bread	1.36	2.57	72	.98	1.85	83	1.13	2.13	69	.94	1.77	130	1.77	3.34	141	1.92	3.62	82	1.12	2.11
Rolls	1.56	5.19	46	.72	2.39	51	.80	2.65	50	.78	2.60	93	1.45	4.83	97	1.51	5.03	49	.76	2.54
Pineapple cake	.61	7.98	46	.28	3.67	......	....	....	47	.29	3.75	......	....	....	......	....	....	49	.30	3.91
Layer cake	.76	13.35	54	.41	7.21	52	.40	6.94	56	.43	7.46	54	.41	7.21	58	.44	7.74	......	....	....
Biscuit	1.22	15.26	86	1.05	13.21	81	.99	12.36	88	1.07	13.43	25	.31	3.82	87	1.06	13.28	67	.82	10.22
Shredded wheat	1.75	1.47	34	.60	.50	32	.56	.46	33	.58	.49	34	.60	.50	30	.53	.44	32	.56	.47
Rice	.22	.11	120	.26	.13	120	.26	.13	120	.26	.13	120	.26	.13	120	.26	.13	120	.26	.13
Beefsteak	4.40	4.68	52	2.29	2.43	54	2.38	2.53	59	2.60	2.76	53	2.33	2.48	57	2.51	2.67	60	2.64	2.81
Minced meat	3.72	17.07	47	1.75	8.02	50	1.86	8.54	50	1.86	8.54	50	1.86	8.54	......	....	....	50	1.86	8.54
Soup	.17	1.22	211	.36	2.57	211	.36	2.57	211	.36	2.57	211	.36	2.57	211	.36	2.57	211	.36	2.57
Butter	.08	84.58	72	.06	60.90	141	.11	119.26	103	.08	87.12	71	.06	60.05	73	.06	61.74	66	.05	55.82
Milk	.52	3.94	200	1.04	7.88	200	1.04	7.88	350	1.82	13.79	150	.78	5.91	200	1.04	7.88	75	.39	2.96
Sugar	....	....	61	....	....	35	....	....	154	....	....	86	....	....	65	....	....	14	....	....
Sweet potatoes	.14	1.41	121	.17	1.71	87	.12	1.23	95	.13	1.34	113	.16	1.59	80	.11	1.13	155	.22	2.19
Creamed potatoes	.35	2.41	100	.35	2.41	104	.36	2.51	100	.35	2.41	100	.35	2.41	150	.53	3.62	100	.35	2.41
Tomatoes	.16	.15	124	.20	.19	141	.23	.21	129	.21	.19	146	.23	.22	129	.21	.19	......	....	....
Apple	.02	.17	152	.03	.26	133	.33	.23	......	....	....	125	.03	.21	156	.03	.27	......	....	....
Sherbet	.00	.15	109	.00	.16	107	.00	.16	127	.00	.19	100	.00	.15	......	....	....	131	.00	.20
Bananas	.16	.14	......	....	....	......	....	....	145	.23	.20	......	....	....	......	....	....	140	.22	.20
Tea	.002	.02	125	.01	.03	......	....	....	125	.01	.03	125	.01	.03	125	.01	.03	......	....	....
Coffee	.04	.04	125	.05	.05	......	....	....	125	.05	.05	125	.05	.05	......	....	....	125	.05	.05
Total	....	....	......	10.61	115.57	......	10.63	169.79	......	12.05	148.82	......	11.02	104.04	......	10.58	110.34	......	9.96	97.13
September 10.																				
Bread	1.36	2.57	99	1.35	2.54	76	1.03	1.95	82	1.12	2.11	150	2.04	3.86	141	1.92	3.62	101	1.37	2.60
Rolls	1.56	5.19	46	.72	2.39	......	....	....	49	.76	2.54	91	1.42	4.72	139	2.16	7.21	88	1.37	4.57
Pie	.44	14.06	138	.61	19.40	128	.56	18.00	153	.67	21.51	151	.66	21.23	126	.55	17.72	136	.60	19.12
Muffins	1.13	10.79	142	1.60	15.32	139	1.57	15.00	139	1.57	15.00	119	1.34	12.84	182	2.06	19.64	145	1.64	15.65
Oatmeal	.44	.36	150	.66	.54	150	.66	.54	150	.66	.54	150	.66	.54	150	.66	.54	150	.66	.54
Pot roast	6.26	4.75	57	3.57	2.71	53	3.32	2.52	55	3.44	2.61	55	3.44	2.61	56	3.51	2.66	50	3.13	2.38
Gravy	.75	10.04	43	.32	4.32	47	.35	4.72	50	.38	5.02	47	.35	4.72	44	.33	4.42	50	.38	5.02
Soup	.10	.32	224	.22	.72	224	.22	.72	224	.22	.72	224	.22	.72	224	.22	.72	224	.22	.72

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
September 10—Con.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Cheese	3.75	34.88				24	0.90	8.37	22	0.83	7.67	21	0.79	7.32				21	0.79	7.32
Butter	.08	84.58	72	0.06	60.90	127	.10	107.42	98	.08	82.89	98	.08	82.89	104	.08	87.96	75	.06	63.44
Eggs	2.43	19.03	51	1.24	9.71	51	1.24	9.71	40	.97	7.61	55	1.34	10.47	51	1.24	9.71	52	1.26	9.90
Milk	.52	3.94	225	1.17	8.87	250	1.30	9.85	350	1.82	13.79	150	.78	5.91	100	.52	3.94			
Sugar			51			57			131			93			64			58		
Corn	.45	2.86	80	.36	2.29				80	.36	2.29	80	.36	2.29				80	.36	2.29
Beans	.99	3.99	40	.40	1.60				40	.40	1.60	40	.40	1.60				40	.40	1.60
Mashed potatoes	.27	.55	117	.32	.64	120	.32	.66	122	.33	.67	122	.33	.67	119	32	.65	120	.32	.66
Fried potatoes	.53	4.33	86	.46	3.72	129	.68	5.59				75	.40	3.25	84	.45	3.64	88	.47	3.81
Bananas	.16	.14				100	.16	.14	100	.16	.14	100	.16	.14	100	.16	.14	100	.16	.14
Peaches	.07	.03	100	.07	.03				100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03
Tea	.002	.02	125	.01	.03				125	.01	.03	125	.01	.03	125	.01	.03	125	.01	.03
Coffee	.04	.04	125	.05	.05				125	.05	.05	125	.05	.05				125	.05	.05
Total				13.19	135.78		12.41	185.19		13.90	166.82		14.90	165.89		14.26	162.63		13.32	139.87
September 11.																				
Bread	1.36	2.57	102	1.39	2.62	62	.84	1.59	96	1.31	2.47	155	2.11	3.98	150	2.04	3.86	86	1.17	2.21
Rolls	1.56	5.19	47	.73	2.44	45	.70	2.34	94	1.47	4.88	93	1.45	4.83	93	1.45	4.83	93	1.45	4.83
Toast	1.68	3.03	54	.91	1.64	40	.67	1.21	88	1.48	2.67	31	.52	.94	45	.76	1.36	85	1.43	2.58
Wafers	.91	13.32	17	.15	2.26	17	.15	2.26	17	.15	2.26	16	.15	2.13	16	.15	2.13	16	.15	2.13
Pudding	.86	.52	136	1.17	.71	148	1.27	.77	180	1.55	.94	120	1.03	.62	126	1.08	.66			
Oatmeal	.44	.36	150	.66	.54	150	.66	.54				150	.66	.54	150	.66	.54	150	.66	.54
Pot roast	6.26	4.75	31	1.94	1.47	28	1.85	1.33	30	1.88	1.43	28	1.85	1.33				27	1.69	1.28
Soup	.21	2.90	123	.26	3.57	123	.26	3.57	123	.26	3.57	123	.26	3.57	123	.26	3.57	123	.26	3.57
Bluefish	4.32	5.57	63	2.72	3.51	55	2.38	3.06	41	1.77	2.28	50	2.16	2.79	50	2.16	2.79	52	2.25	2.90
Butter	.08	84.58	60	.05	50.75	135	.11	114.18	132	.11	111.65	81	.06	68.51	82	.07	69.36	75	.06	63.44
Milk	.52	3.94	200	1.04	7.88	200	1.04	7.88	175	.91	6.90	100	.52	3.94	100	.52	3.94			
Sugar			57			34			88			71			65			33		
Celery	.20	.10	35	.07	.04	34	.07	.03	35	.07	.04	38	.08	.04	29	.06	.03	47	.09	.05
Sweet potatoes	.14	1.19	119	.17	1.42	123	.17	1.46	170	.24	2.02	108	.15	1.29	111	.16	1.32	161	.23	1.92
Fried potatoes	.65	4.72	64	.42	3.02	74	.48	3.49	65	.42	3.07	65	.42	3.07	74	.48	3.49	58	.38	2.74
Cucumbers	.07	.11	65	.05	.07	65	.05	.07	65	.05	.07	65	.05	.07	65	.05	.07			
Muskmelon	.13	.01	72	.09	.01	80	.10	.01	88	.11	.01	64	.08	.01	76	.10	.01	74	.10	.01
Peaches	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03

Tea	.002	.02	125	.01	.03	......	......	......	125	.01	.03	125	.01	.03	125	.01	.03	125	.01	.03
Coffee	.04	.04	125	.05	.05	......	......	......	125	.05	.05	125	.05	.05	......	......	......	125	.05	.05
Total	......	......	......	11.95	82.06	......	10.87	143.82	......	11.91	144.37	......	11.58	97.77	......	10.08	98.02	......	10.05	88.31
September 12.																				
Bread	1.36	2.57	85	1.16	2.18	90	1.22	2.31	30	.41	.77	114	1.55	2.93	154	2.09	3.96	96	1.31	2.47
Rolls	1.56	5.19	45	.70	2.34	51	.80	2.65	86	1.34	4.46	82	1.28	4.26	93	1.45	4.83	39	.61	2.02
Pie	.54	15.95	134	.54	15.72	136	.54	15.95	142	.57	16.66	138	.55	16.19	110	.44	12.90	137	.55	16.07
Crullers	1.11	20.40	......	......	......	50	.56	10.20	115	1.28	23.46	39	.43	7.96	......	......	......	46	.51	9.38
Toast	1.68	3.03	32	.54	.97	......	......	......	35	.59	1.06	40	.67	1.21	76	1.28	2.30	38	.64	1.15
Force	1.95	1.48	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30
Corned beef	4.93	6.31	48	2.37	3.03	40	1.97	2.52	56	2.76	3.53	54	2.66	3.41	54	2.66	3.41	50	2.47	3.16
Soup	.22	1.66	194	.43	3.22	194	.43	3.22	194	.43	3.22	194	.43	3.22	194	.43	3.22	194	.43	3.22
Baked beans	1.15	2.26	200	2.30	4.52	200	2.30	4.52	200	2.30	4.52	200	2.30	4.52	200	2.30	4.52	200	2.30	4.52
Cheese	4.82	34.88	......	......	......	28	1.35	9.77	27	1.30	9.42	21	1.01	7.32	......	......	......	23	1.11	8.02
Butter	.08	84.58	55	.04	46.52	94	.08	79.51	68	.05	57.51	85	.07	71.89	84	.07	71.05	68	.05	57.51
Milk	.52	3.94	200	1.04	7.88	150	.78	5.91	325	1.69	12.81	150	.78	5.91	100	.52	3.94	75	.39	2.96
Sugar	......	......	40	......	......	67	......	......	121	......	......	93	......	......	50	......	......	41	......	......
Corn	.49	1.94	177	.87	3.43	167	.82	3.24	......	......	......	100	.49	1.94	......	......	......	144	.71	2.79
Mashed potatoes	.27	.55	109	.29	.60	111	.30	.61	104	.28	.57	118	.32	.65	109	.29	.60	117	.32	.64
Potato chips	1.07	31.46	24	.26	7.55	20	.21	6.29	30	.32	9.44	25	.27	7.87	25	.27	7.87	25	.27	7.87
Bananas	.16	.14	......	......	......	100	.16	.14	90	.14	.13	90	.14	.13	90	.14	.13	90	.14	.13
Peaches	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	......	......	......	100	.07	.03
Tea	.002	.02	......	......	......	......	......	......	125	.01	.03	125	.01	.03	125	.01	.03	......	......	......
Coffee	.04	.04	125	.05	.05	......	......	......	......	......	......	125	.05	.05	......	......	......	125	.05	.05
Total	......	......	......	11.05	98.34	......	11.98	147.17	......	13.93	147.92	......	13.47	139.82	......	12.34	119.06	......	12.32	122.29
September 13.																				
Bread	1.36	2.57	73	.99	1.88	69	.94	1.77	98	1.33	2.52	83	1.13	2.13	121	1.65	3.11	85	1.06	2.18
Rolls	1.56	5.83	45	.70	2.62	43	.67	2.51	79	1.23	4.61	85	1.33	4.96	76	1.19	4.43	42	.66	2.45
Wafers	.88	16.12	24	.21	3.87	24	.21	3.87	23	.20	3.71	24	.21	3.87	......	......	......	24	.21	3.87
Toast	1.68	3.03	63	1.06	1.91	53	.89	1.61	52	.87	1.58	52	.87	1.58	51	.86	1.55	50	.84	1.52
Cream of wheat	.31	.19	150	.47	.29	150	.47	.29	100	.31	.19	150	.47	.29	150	.47	.29	150	.47	.29
Rice	.22	.11	110	.24	.12	110	.24	.12	110	.24	.12	110	.24	.12	110	.24	.12	110	.24	.12
Ham	5.00	11.15	26	1.30	2.90	23	1.15	2.56	41	2.05	4.57	31	1.55	3.46	......	......	......	35	1.75	3.90
Lamb chops	4.34	11.19	......	......	......	......	......	......	73	3.17	8.17	......	......	......	......	......	......	63	2.73	7.05
Chicken	4.66	5.95	76	3.54	4.52	98	4.57	5.83	......	......	......	58	2.70	3.45	74	3.45	4.40	......	......	......
Soup	.27	2.65	180	.49	4.77	180	.49	4.77	180	.49	4.77	180	.49	4.77	180	.49	4.77	180	.49	4.77
Milk for toast	.53	2.98	195	1.03	5.81	195	1.03	5.81	195	1.03	5.81	195	1.03	5.81	195	1.03	5.81	195	1.03	5.81
Butter	.08	84.58	63	.05	53.29	74	.06	62.59	98	.08	82.89	48	.04	40.60	63	.05	53.29	60	.05	50.75
Milk	.52	3.94	150	.78	5.91	250	1.30	9.85	260	1.35	10.24	150	.78	5.91	150	.78	5.91	......	......	......
Sugar	......	......	43	......	......	54	......	......	151	......	......	80	......	......	88	......	......	33	......	......
Tomatoes	.16	.15	146	.23	.22	126	.20	.19	175	.28	.26	164	.26	.25	145	.23	.22	127	.20	.19
Mashed potatoes	27	.55	135	.36	.74	139	.38	.76	147	.40	.81	157	.42	.86	163	.44	.90	147	.40	.81
Fried potatoes	53	5.06	87	.46	4.40	105	.56	5.31	107	.57	5.41	110	.58	5.57	103	.55	5.21	100	.53	5.06
Pears	.05	.12	104	.05	.12	74	.04	.09	88	.04	.11	200	.10	.24	89	.04	.11	......	......	......
Peaches	.07	.03	......	......	......	100	.07	.03	......	......	......	100	.07	.03	......	......	......	100	.07	.03
Ice cream	.52	2.97	130	.68	3.86	136	.71	4.04	115	.60	3.42	105	.55	3.12	......	......	......	106	.55	3.15

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E C. M. Amount of food.	E C. M. Nitrogen.	E C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
September 13—Con.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Tea	0.002	0.02	125	0.01	0.03				125	0.01	0.03	125	0.01	0.03	125	0.01	0.03	125	0.01	0.03
Coffee	.04	.04	125	.05	.05				125	.05	.05	125	.05	.05				125	.05	.05
Total				12.70	97.31		13.98	112.00		14.30	139.27		12.88	87.10		11.48	90.15		11.34	92.03
September 14.																				
Bread	1.36		141	1.92		81	1.10		89	1.21		100	1.36		134	1.82		93	1.26	
Rolls	1.56		51	.80		45	.70		91	1.42		94	1.47		90	1.40		93	1.45	
Custard pie	.90		166	1.49		149	1.34		151	1.36		140	1.26		168	1.51		149	1.34	
Cocoanut wafers	.88								47	.41								23	.20	
Biscuits	1.18		95	1.12		89	1.05		106	1.25		91	1.07		85	1.00		82	.97	
Cream of wheat	.31		150	.47		150	.47					150	.47		150	.47		150	.47	
Roast beef	4.61		50	2.31		88	4.05		55	2.54		88	4.06		55	2.54		92	4.25	
Beef soup	.27		206	.56		206	.56		206	.56		206	.56		206	.56		206	.56	
Ham	4.41								43	1.90										
Macaroni	.60		81	.49		93	.56					92	.55		90	.54		99	.59	
Butter	.08		90	.07		122	.10		105	.08		76	.06		78	.06		71	.06	
Milk	.52		150	.78		200	1.04		150	.78		100	.52		100	.52				
Sugar			35			42			113			86			53			24		
Mashed potatoes	.27		121	.33		114	.31		101	.27		114	.31		137	.37		136	.37	
French fried potatoes	.59		85	.50		76	.45		80	.47		77	.45		100	.59		85	.50	
Cucumbers	.07		50	.04		50	.04		50	.04		50	.04		100	.07				
Tomatoes	.16		147	.24		284	.45		171	.27		175	.28		172	.28				
Bananas	.16		100	.16		100	.16		100	.16		100	.16		100	.16		100	.16	
Tea	.002		125	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				11.34			12.38			12.78			12.68			11.90			12.24	
September 15.																				
Bread	1.36		130	1.77		74	1.01		137	1.86		126	1.71		159	2.16		84	1.14	
Rolls	1.56		53	.83		48	.75		100	1.56		96	1.50		96	1.50		91	1.42	
Apple pie	.37		141	.52		129	.48		159	.59		152	.56		131	.48		149	.55	
Chocolate cake	1.08		60	.65					91	.98		82	.89					74	.80	

Toast	1.68	49	.82	44	.74	54	.91	45	.76	47	.79	45	.76
Force	1.95	20	.39	20	.39	20	.39	20	.39	20	.39	20	.39
Roast lamb	5.65	57	3.22	52	2.94	57	3.22	59	3.33	53	2.99	56	3.16
Potato soup	.22	223	.49	223	.49	223	.49	223	.49	223	.49	223	.49
Lamb hash	1.70	120	2.04	120	2.04	120	2.04	120	2.04	120	2.04	120	2.04
Cheese	4.94			19	.94	29	1.43	28	1.38			17	.84
Butter	.08	88	.07	102	.08	96	.08	78	.06	70	.06	72	.06
Milk	.52	150	.78	100	.52	225	1.17	100	.52	100	.52	75	.39
Sugar		40		32		84		44		41			
Sweet potatoes	.14	134	.19	115	.16	143	.20	131	.18	105	.15	175	.25
Squash	.20	100	.20	100	.20			100	.20	100	.20		
Cucumbers	.07			120	.08	120	.08						
Grapes	.18	98	.18	214	.39	189	.34	198	.36	143	.26		
Tea	.002	125	.01			250	.01	125	.01	125	.01	125	.01
Coffee	.04	125	.05			125	.05	125	.05			125	.05
Total			12.21		11.21		15.40		14.43		12.04		12.35
September 16.													
Bread	1.36	92	1.25	78	1.06	74	1.00	139	1.89	148	2.01	136	1.85
Rolls	1.56	46	.72	42	.66	54	.84	96	1.50	95	1.48	92	1.44
Muffins	1.08	185	2.00	117	1.26	187	2.02	113	1.22	179	1.93	250	2.70
Oatmeal	.44	150	.66	150	.66	150	.66	150	.66	150	.66	150	.66
Steak	4.02	52	2.09	54	2.17	56	2.25	51	2.05	51	2.05	56	2.25
Ham	4.41	32	1.41	37	1.63	34	1.50	32	1.41			34	1.50
Vegetable soup	.39	216	.84	216	.84	216	.84	216	.84	216	.84	216	.84
Butter	.08	90	.07	94	.08	93	.07	68	.05	63	.05	88	.07
Milk	.52	150	.78	200	1.04	250	1.30	100	.52	100	.52		
Sugar		61		50		183		104		73		36	
Onions	.25	96	.24	107	.27	102	.26	115	.29	95	.24		
Mashed potatoes	.27	116	.31	108	.29	105	.28	111	.30	102	.28	104	.28
Creamed potatoes	.33	133	.44	113	.37	111	.37	145	.48	189	.62	130	.43
Tomatoes	.16	163	.26	171	.27	198	.32	179	.29	167	.27	148	.24
Bananas	.16			100	.16	100	.16	100	.16	100	.16	100	.16
Peaches	.07	100	.07	100	.07	100	.07	100	.07	100	.07	100	.07
Orange ice	.01	109	.01	127	.01	122	.01	142	.01	106	.01	114	.01
Tea	.002	125	.01			125	.01	125	.01	125	.01	125	.01
Coffee	.04	125	.05			125	.01	125	.05			125	.01
Total			11.21		10.84		12.01		11.80		11.20		12.56
September 17.													
Bread	1.36	80	1.09	80	1.09	85	1.16	144	1.96	140	1.90	115	1.56
Rolls	1.56	45	.70	41	.64	94	1.47	95	1.48	99	1.54	45	.70
Apple pie	.37	123	.46	170	.63	139	.51	156	.58	150	.56	148	.55
Biscuits	1.24	94	1.17	102	1.26	93	1.15	96	1.19	96	1.19	72	.89
Shredded wheat	1.75	34	.60	31	.54	33	.58	32	.56	32	.56	33	.58
Pot roast	5.98	83	4.96	88	5.26	85	5.08	88	5.26	88	5.26	88	5.26
Gravy	.54	41	.22	40	.22	44	.24	40	.22	40	.22	43	.23
Bean soup	.19	210	.40	210	.40	210	.40	210	.40	210	.40	210	.40

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
September 17—Con.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Cheese	4.09					22	0.90		29	1.19		22	0.90					29	1.19	
Butter	.08		78	0.06		103	.08		98	.08		91	.07		69	0.06		61	.05	
Milk	.52		150	.78		200	1.04		200	1.04		100	.52		100	.52		75	.39	
Sugar			50			35			130			74			57			25		
Corn	.45		60	.27		60	.27		60	.27		60	.27		60	.27		60	.27	
Beans	.99		40	.40		40	.40		40	.40		40	.40		40	.40		40	.40	
Mashed potatoes	.27		125	.34		112	.30		108	.29		115	.31		113	.31		114	.31	
Baked sweet potatoes	.18		111	.20		115	.21		211	.38		178	.32		144	.26		149	.27	
Cucumbers	.07		60	.04		60	.04		60	.04		60	.04		60	.04		60	.04	
Grapes	.18					89	.16		64	.12		90	.16		87	.16				
Oranges	.12		95	.11		110	.13		106	.13		101	.12		120	.14		127	.15	
Tea	.002		125	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05							
Total				11.86			13.57			14.59			14.82			13.80			13.25	
September 18.																				
Bread	1.36		83	1.13		86	1.17		88	1.20		124	1.69		128	1.74		95	1.29	
Rolls	1.56		43	.67		43	.67		93	1.45		94	1.47		90	1.40		93	1.45	
Peach shortcake	.39		182	.71		230	.90		201	.78		253	.99		166	.65		181	.71	
Toast	1.68		81	1.36		83	1.39		85	1.43		85	1.43		95	1.60		78	1.31	
Oatmeal	.44		150	.66		150	.66					150	.66		150	.66		150	.66	
Steak	4.61		51	2.35		57	2.63		51	2.35		51	2.35		55	2.54		52	2.40	
Macaroni soup	.22		211	.46		211	.46		211	.46		211	.46		211	.46		211	.46	
Buttered milk	.45		203	.91		203	.91		203	.91		203	.91		203	.91		203	.91	
Butter	.08		75	.06		92	.07		49	.04		64	.05		71	.06		61	.05	
Scrambled eggs	2.43		55	1.34		53	1.29		55	1.34		50	1.22					50	1.22	
Milk	.52		150	.78		250	1.30		150	.78		100	.52		100	.52				
Sugar			41			17			117			78			68			9		
Corn	.59		100	.59		100	.59		100	.59		100	.59		100	.59		100	.59	
Mashed potatoes	.27		144	.39		135	.36		93	.25		130	.35		121	.33		120	.32	
French fried potatoes	.65		87	.57		90	.59		87	.57		94	.61		100	.65		90	.59	
Tomatoes	.16		158	.25		314	.50		175	.28		192	.31		150	.24				
Oranges	.12					113	.14		111	.13		224	.27							
Grapes	.18					90	.16		78	.14		87	.16		81	.15				

Tea	.002		125	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				12.29			13.79			12.76			14.10			12.51			12.02	
September 19.																				
Bread	1.36		94	1.28		98	1.33		72	.98		140	1.90		159	2.16		91	1.24	
Rolls	1.56		139	2.17		48	.75		144	2.25		140	2.18		94	1.47		188	2.93	
Lemon meringue pie	.62		164	1.02		166	1.03		170	1.05		174	1.08		174	1.08		197	1.22	
Corn flakes	1.07		20	.21		20	.21		20	.21		20	.21		20	.21				
Roast beef	4.96		50	2.48		49	2.43		55	2.73		53	2.63		46	2.28		55	2.73	
Rice soup	.25		225	.56		225	.56		225	.56		225	.56		225	.56		225	.56	
Baked beans	1.23		200	2.46		200	2.46		200	2.46		200	2.46		200	2.46		200	2.46	
Butter	.08		94	.08		90	.07		85	.07		69	.06		81	.06		97	.08	
Milk	.52		150	.78		150	.78		200	1.04		150	.78		150	.78				
Sugar			51			35			137			75			80			17		
Celery	.15		42	.06		25	.04		27	.04		46	.07		37	.06		42	.06	
Mashed potatoes	.27		110	.30		100	.27		106	.29		105	.28		100	.27		100	.27	
Potato chips	1.16		22	.26		26	.30		25	.29		21	.24		24	.28		31	.36	
Cucumbers	.07		60	.04		60	.04		60	.04		60	.04		60	.04				
Tomatoes	.26		100	.26		100	.26		100	.26					100	.26				
Bananas	.16					130	.21		130	.21		130	.21		130	.21		123	.20	
Pears	.05					178	.09		98	.05		183	.09		195	.10				
Tea	.002		125	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				12.02			10.83			12.59			12.85			12.29			12.17	
September 20.																				
Bread	1.36		104	1.41		51	.69		77	1.05		103	1.40		77	1.05		102	1.39	
Rolls	1.56		49	.76		40	.62		88	1.37		98	1.53		94	1.47		45	.70	
Vanilla wafers	1.03					20	.21		20	.21										
Toast	1.68		48	.81		43	.72		43	.72		40	.67		53	.89		60	1.01	
Rice	.22		110	.24		110	.24		110	.24		110	.24		110	.24				
Cream of wheat	.31		150	.47		150	.47		150	.47		150	.47		150	.47				
Lamb chops	4.25		50	2.13		74	3.15		59	2.51		74	3.15		64	2.72		52	2.21	
Roast beef	4.96		30	1.49		30	1.49		30	1.49		30	1.49		31	1.54		26	1.29	
Lamb broth	.21		204	.43		204	.43		204	.43		204	.43		204	.43		204	.43	
Ice cream	.24					97	.23		99	.24		90	.22		99	.24		105	.25	
Butter	.08		54	.04		102	.08		103	.08		74	.06		54	.04		84	.07	
Milk	.52		200	1.04		150	.78		250	1.30		100	.52		150	.78				
Sugar			54			38			210			63			77			19		
Celery	.15		40	.06		48	.07		32	.05		45	.07		58	.09		41	.06	
Sweet potatoes	.14		151	.21		165	.23		192	.27		162	.23		110	.15		252	.35	
Fried potatoes	.53		90	.48		90	.48		90	.48		100	.53		100	.53		100	.53	
Tomatoes	.16		185	.30		195	.31		395	.63					155	.25		144	.23	
Pears	.05		85	.04																
Grapes	.18					71	.13		67	.12		92	.17		81	.15				
Oranges	.12		100	.12		103	.12		102	.12		100	.12		102	.12		110	.13	

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
September 20—Con.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Tea	0.002		125	0.01					125	0.01		125	0.01		125	0.01		125	0.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				10.09			10.45			11.84			11.36			11.17			8.71	
September 21.																				
Bread	1.38	2.38	95	1.31	2.26	88	1.21	2.09	71	.98	1.69	125	1.73	2.98	160	2.21	3.81	95	1.31	2.26
Rolls	1.59	5.48	40	.64	2.19	43	.68	2.36	85	1.35	4.66	94	1.49	5.15	97	1.54	5.32	92	1.46	5.04
Pie	.82	10.78	167	1.37	18.00	145	1.19	15.63	148	1.21	15.95	144	1.18	15.52	179	1.47	19.30	179	1.47	19.30
Cake	.83	14.25	67	.56	9.55	71	.59	10.12	70	.58	9.98	75	.62	10.69	70	.58	9.98			
Biscuit	1.16	19.05	88	1.02	16.76	90	1.04	17.15	96	1.11	18.29	96	1.11	18.29	84	.97	16.00	93	1.08	17.72
Cream of wheat	.28	.07	150	.42	.11	150	.42	.11	150	.42	.11	150	.42	.11	150	.42	.11	150	.42	.11
Roast beef	4.42	6.64	60	2.65	3.98	52	2.30	3.45	50	2.21	3.32	53	2.34	3.52	53	2.34	3.52	55	2.43	3.65
Ham	4.15	11.56	24	1.00	2.77	25	1.04	2.89	23	.95	2.66	20	.83	2.31	30	1.25	3.47	28	1.16	3.24
Soup	.20	.30	219	.44	.66	219	.44	.66	219	.44	.66	219	.44	.66	219	.44	.66	219	.44	.66
Butter	.11	85.31	90	.10	76.78	113	.12	96.40	125	.14	106.64	88	.10	75.07	92	.10	78.49	70	.08	59.72
Milk	.56	3.44	150	.84	5.16	150	.84	5.16	200	1.12	6.88	100	.56	3.44	100	.56	3.44			
Sugar			49			59			95			80			47			11		
Mashed potatoes	.37	.67	142	.53	.95	145	.54	.97	100	.37	.67	145	.54	.97	137	.51	.92	139	.51	.93
Baked sweet potatoes	.17	1.65	141	.24	2.33	101	.17	1.67	205	.35	3.38	207	.35	3.42	128	.22	2.11	141	.24	2.33
Bananas	.16	.10				80	.13	.08	80	.13	.08	80	.13	.08	80	.13	.08	80	.13	.08
Tea	.002	.004	125	.01	.01				125	.01	.01	125	.01	.01	125	.01	.01			
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				11.18	141.55		10.71	158.74		11.42	175.02		11.90	142.26		12.75	147.22		10.78	115.08
September 22.																				
Bread	1.38	2.38	87	1.20	2.07	64	.88	1.52	58	.80	1.38	121	1.67	2.88	144	1.99	3.43	84	1.16	2.00
Rolls	1.59	5.48	50	.80	2.74	45	.72	2.47	47	.75	2.58	97	1.54	5.32	87	1.38	4.77	95	1.51	5.21
Cake	1.26	.09	34	.43	.03							41	.52	.04	35	.44	.03	28	.35	.03
Muffins	1.12	11.11	141	1.58	15.56	96	1.08	10.67	216	2.42	24.00	163	1.83	18.11	152	1.70	16.89	173	1.94	19.22
Cream of wheat	.28	.07	150	.42	.11	150	.42	.11	150	.42	.11	150	.42	.11	150	.42	.11	150	.42	.11
Pudding	.56	2.94	143	.80	4.20				138	.77	4.06	136	.76	4.00	130	.73	3.82			
Veal cutlet	5.26	4.44	59	3.10	2.62	57	3.00	2.53	53	2.79	2.35	57	3.00	2.53	51	2.68	2.26	55	2.89	2.44

Minced veal	3.20	6.97	50	1.60	3.49	51	1.63	3.55	54	1.73	3.76	50	1.60	3.49	50	1.60	3.49	50	1.60	3.49
Soup	.19	3.78	222	.42	8.39	222	.42	8.39	222	.42	8.39	222	.42	8.39	222	.42	8.39	222	.42	8.39
Butter	.11	85.31	86	.09	73.37	89	.09	75.93	122	.13	104.08	65	.07	55.45	81	.09	69.10	99	.11	84.46
Milk	.56	3.44	150	.84	5.16	100	.56	3.44	200	1.12	6.88	100	.56	3.44	50	.28	1.72	...	...	...
Sugar	...	...	31	...	...	22	...	...	89	...	...	75	...	...	45	...	...	17	...	...
Lima beans	.96	3.11	75	.72	2.33	75	.72	2.33	75	.72	2.33	75	.72	2.33	75	.72	2.33	75	.72	2.33
Mashed potatoes	.37	.28	126	.47	.35	138	.51	.39	120	.44	.34	117	.43	.33	114	.42	.32	123	.46	.34
French fried potatoes	.76	10.74	72	.55	7.73	89	.68	9.56	81	.62	8.70	84	.64	9.02	87	.66	9.34	70	.53	7.52
Bananas	.16	.10	...	...	...	85	.14	.09	85	.14	.09	85	.14	.09	85	.14	.09	85	.14	.09
Grapes	.18	.10	...	...	...	101	.18	.10	...	...	...	111	.20	.11	111	.20	.11	...	...	...
Tea	.002	.004	125	.01	.01	...	...	...	125	.01	.01	125	.01	.01	...	...	...	...	...	...
Coffee	.04	.03	125	.05	.04	...	...	...	125	.05	.04	125	.05	.04	125	.05	.04	125	.05	.04
Total	...	...	...	13.08	128.20	...	11.03	121.08	...	13.33	169.10	...	14.58	115.72	...	13.88	126.21	...	12.30	135.67
September 23.																				
Bread	1.38	2.38	105	1.45	2.50	79	1.09	1.88	92	1.27	2.19	130	1.79	3.09	141	1.95	3.36	89	1.23	2.12
Rolls	1.59	5.48	44	.70	2.41	40	.64	2.19	93	1.48	5.10	88	1.40	4.82	87	1.38	4.77	85	1.35	4.66
Pie	.37	11.88	149	.55	17.70	132	.49	15.68	139	.51	16.51	148	.55	17.58	134	.50	15.92	134	.50	15.92
Cake	.59	9.46	...	...	...	77	.45	7.28	77	.45	7.28	69	.41	6.53	...	...	...	...	...	...
Toast	1.76	2.36	42	.74	.99	38	.67	.90	43	.76	1.01	43	.76	1.01	43	.76	1.01	41	.72	.97
Oatmeal	.35	.54	150	.53	.81	150	.53	.81	150	.53	.81	150	.53	.81	150	.53	.81	150	.53	.81
Hamburg steak	4.26	10.39	49	2.09	5.09	54	2.30	5.61	53	2.26	5.51	50	2.13	5.20	52	2.22	5.40	53	2.26	5.51
Soup	.17	.91	217	.37	1.97	217	.37	1.97	217	.37	1.97	217	.37	1.97	217	.37	1.97	217	.37	1.97
Cheese	4.06	32.86	...	...	...	21	.85	6.90	24	.97	7.89	23	.93	7.56	21	.85	6.90	22	.89	7.23
Butter	.11	85.31	81	.09	69.10	115	.13	98.11	110	.12	93.84	82	.09	69.95	98	.11	83.60	78	.09	66.54
Eggs	2.03	14.86	51	1.04	7.58	54	1.10	8.02	53	1.08	7.88	50	1.02	7.43	50	1.02	7.43	50	1.02	7.43
Milk	.56	3.44	150	.84	5.16	150	.84	5.16	150	.84	5.16	100	.56	3.44	50	.28	1.72	...	...	...
Sugar	...	...	52	...	...	49	...	...	123	...	...	70	...	...	67	...	...	18	...	...
Mashed potatoes	.37	.28	139	.51	.39	156	.58	.44	129	.48	.36	122	.45	.34	110	.41	.31	120	.44	.34
Baked sweet potatoes	.17	1.65	150	.26	2.48	154	.26	2.54	200	.34	3.30	239	.41	3.94	217	.37	3.58	265	.45	4.37
Stewed tomatoes	.27	.77	100	.27	.77	100	.27	.77	100	.27	.77	100	.27	.77	100	.27	.77	100	.27	.77
Sliced tomatoes	.22	.07	138	.30	.10	191	.42	.13	143	.31	.10	115	.25	.08	130	.29	.09	122	.27	.09
Oranges	.12	.14	90	.11	.13	107	.13	.15	91	.11	.13	105	.13	.15	88	.11	.12	75	.09	.11
Apple sauce	.04	.06	...	...	...	200	.08	.12	100	.04	.06	100	.04	.06	100	.04	.06	...	...	...
Tea	.002	.004	125	.01	.01	...	...	...	125	.01	.01	125	.01	.01	125	.01	.01	...	...	...
Coffee	.04	.03	125	.05	.04	...	...	...	125	.05	.04	125	.05	.04	...	...	...	125	.05	.04
Total	...	...	...	9.91	117.23	...	11.20	158.66	...	12.25	159.92	...	12.15	134.78	...	11.47	137.83	...	10.53	118.88
September 24.																				
Bread	1.38	2.38	92	1.27	2.19	75	1.04	1.79	134	1.85	3.19	148	2.04	3.52	149	2.06	3.55	118	1.63	2.81
Rolls	1.59	5.48	95	1.51	5.21	49	.78	2.69	85	1.35	4.66	100	1.59	5.48	90	1.43	4.93	90	1.43	4.93
Cookies	1.16	23.04	20	.23	4.61	20	.23	4.61	21	.24	4.84	19	.22	4.38	22	.26	5.07	23	.27	5.30
Cake	1.51	6.52	...	...	...	32	.48	2.09	39	.59	2.54	34	.51	2.22	...	...	...	...	...	...
Hominy	.33	1.92	210	.69	4.03	221	.73	4.24	244	.81	4.68	220	.73	4.22	226	.75	4.34	250	.83	4.80
Sirup	...	...	59	...	...	75	...	...	48	...	...	73	...	...	...	...	...	26	...	...
Shredded wheat	1.67	1.47	32	.53	.47	30	.50	.44	31	.52	.46	31	.52	.46	30	.50	.44	31	.52	.46
Pork chops	5.45	6.16	61	3.32	3.76	74	4.03	4.56	65	3.54	4.00	70	3.82	4.31	63	3.43	3.88	55	3.00	3.39
Hash	1.88	10.30	92	1.73	9.48	100	1.88	10.30	107	2.01	11.02	101	1.90	10.40	103	1.94	10.61	100	1.88	10.30

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
September 24—Con.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Soup	0.22	0.52	208	0.46	1.08	208	0.46	1.08	208	0.46	1.08	208	0.46	1.08	208	0.46	1.08	208	0.46	1.08
Butter	.11	85.31	63	.07	53.75	83	.09	70.81	83	.09	70.81	46	.05	39.24	80	.09	68.25	70	.08	59.72
Milk	.56	3.44	150	.84	5.16	100	.56	3.44	200	1.12	6.88	100	.56	3.44	100	.56	3.44	75	.42	2.58
Sugar			39			29			69			43			48					
Mashed potatoes	.37	.28	124	.46	.35	154	.57	.43	150	.56	.42	137	.51	.38	134	.50	.38	136	.50	.38
Cucumbers	.07	.02	82	.06	.02	84	.06	.02	84	.06	.02	80	.06	.02	87	.06	.02			
Grapes	.18	.10				121	.22	.12	120	.22	.12	118	.21	.12	105	.19	.11			
Apple sauce	.04	.06	100	.04	.06	100	.04	.06	100	.04	.06	100	.04	.06	100	.04	.06	100	.04	.06
Orange ice	.01	.56	120	.01	.67	99	.01	.55	114	.01	.64	115	.01	.64	97	.01	.54	130	.01	.73
Tea	.002	.004	125	.01	.01				125	.01	.01				125	.01	.01			
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				11.28	90.89		11.68	107.23		13.53	115.47		13.28	80.01		12.29	106.71		11.12	96.58
September 25.																				
Bread	1.38	2.38	94	1.30	2.24	79	1.09	1.88	82	1.13	1.95	135	1.86	3.21	157	2.17	3.74	83	1.15	1.98
Rolls	1.59	5.48	42	.67	2.30	44	.70	2.41	92	1.46	5.04	93	1.48	5.10	89	1.42	4.88	89	1.42	4.88
Cake	.89	13.80	61	.54	8.42	65	.58	8.97	65	.58	8.97	68	.61	9.38	64	.57	8.83	58	.52	8.00
Toast	1.76	2.36	40	.70	.94	31	.55	.73	51	.90	1.20	45	.79	1.06	50	.88	1.18	51	.90	1.20
Cream of wheat	.28	.07	200	.56	.14	200	.56	.14	200	.56	.14	200	.56	.14	200	.56	.14	200	.56	.14
Pudding	.58	4.93	100	.58	4.93	100	.58	4.93	100	.58	4.93	100	.58	4.93	100	.58	4.93	100	.58	4.93
Beefsteak	4.25	6.48	50	2.13	3.24	54	2.30	3.50	52	2.21	3.37	52	2.21	3.37	55	2.34	3.56	54	2.30	3.50
Ham	4.41	8.47	24	1.06	2.03	23	1.01	1.95	25	1.10	2.12	25	1.10	2.12	27	1.19	2.29	20	.88	1.69
Soup	.16	.67	219	.35	1.47	219	.35	1.47	219	.35	1.47	219	.35	1.47	219	.35	1.47	219	.35	1.47
Butter	.11	85.31	59	.06	50.33	108	.12	92.13	102	.11	87.02	94	.10	80.19	93	.10	79.34	83	.09	70.81
Milk	.56	3.44	150	.84	5.16	100	.56	3.44	200	1.12	6.88	100	.56	3.44	50	.28	1.72			
Sugar			47			36			62			78			56			14		
Cucumbers	.07	.02	82	.06	.02	82	.06	.02	82	.06	.02	82	.06	.02	77	.05	.02			
Mashed potatoes	.37	.28	125	.46	.35	123	.46	.34	69	.26	.19	135	.50	.38	136	.50	.38	144	.53	.40
Baked sweet potatoes	.17	1.65	196	.33	3.23	182	.31	3.00	173	.29	2.85	242	.41	3.99	90	.15	1.49	145	.25	2.39
Creamed onions	.28	4.32	125	.35	5.40	125	.35	5.40	125	.35	5.40	125	.35	5.40	125	.35	5.40			
Tomatoes	.22	.07	141	.31	.10	200	.44	.14	167	.37	.12	176	.39	.12	156	.34	.11	152	.33	.11
Bananas	.16	.10	100	.16	.10	100	.16	.10	100	.16	.10	100	.16	.10	100	.16	.10	100	.16	.10
Grapes	.18	.10				31	.06	.03	15	.03	.02	38	.07	.04	31	.06	.03			
Tea	.002	.004	125	.01	.01				125	.01	.01	125	.01	.01	125	.01	.01			

Coffee	.04	.03	125	.05	.04	.....	.....	.....	125	.05	.04	125	.05	.04	.....	.....	.....	125	.05	.04
Total	.....	.....	.....	10.52	90.45	.....	10.24	130.58	.....	11.68	131.84	.....	12.20	124.51	.....	12.06	119.62	.....	10.07	101.64
September 26.																				
Bread	1.38	2.38	81	1.12	1.93	70	.97	1.67	73	1.01	1.74	115	1.59	2.74	132	1.82	3.14	98	1.35	2.33
Rolls	1.59	5.48	49	.78	2.69	46	.73	2.52	97	1.54	5.32	96	1.53	5.26	95	1.51	5.21	44	.70	2.41
Pie	.31	8.72	157	.49	13.69	114	.35	9.94	143	.44	12.47	123	.38	10.73	170	.53	14.82	132	.41	11.51
Cake	.58	9.39	.....	.....	.....	52	.30	4.89	58	.34	5.45	.....	.....	.....	62	.36	5.82	56	.32	5.26
Corn cake	1.24	18.34	91	1.13	16.69	83	1.03	15.22	91	1.13	16.69	95	1.18	17.42	78	.97	14.31	85	1.05	15.59
Corn flakes	1.10	.77	20	.22	.15	20	.22	.15	20	.22	.15	20	.22	.15	20	.22	.15	.....	.....	.....
Pot roast	6.18	7.38	53	3.28	3.91	55	3.40	4.06	54	3.34	3.99	50	3.09	3.69	52	3.21	3.84	51	3.15	3.76
Gravy	.57	9.71	37	.21	3.59	36	.21	3.50	37	.21	3.59	37	.21	3.59	31	.18	3.01	35	.20	3.40
Soup	.21	1.73	197	.41	3.41	197	.41	3.41	197	.41	3.41	197	.41	3.41	197	.41	3.41	197	.41	3.41
Baked beans	1.18	3.17	200	2.36	6.34	200	2.36	6.34	200	2.36	6.34	200	2.36	6.34	100	1.18	3.17	200	2.36	6.34
Butter	.11	85.31	58	.06	49.48	110	.12	93.84	55	.06	46.92	62	.07	52.89	68	.07	58.01	64	.07	54.60
Milk	.56	3.44	100	.56	3.44	150	.84	5.16	200	1.12	6.88	100	.56	3.44	100	.56	3.44	.....	.....	.....
Sugar	.....	.....	56	.....	.....	31	.....	.....	62	.....	.....	81	.....	.....	53	.....	.....	17	.....	.....
Cucumbers	.07	.02	85	.06	.02	85	.06	.02	85	.06	.02	85	.06	.02	85	.06	.02	.....	.....	.....
Mashed potatoes	.37	.28	115	.43	.32	131	.48	.37	152	.56	.43	135	.50	.38	109	.40	.31	128	.47	.36
French fried potatoes	.73	6.79	87	.64	5.91	90	.66	6.11	83	.61	5.64	93	.68	6.31	92	.67	6.25	80	.58	5.43
Cauliflower	.29	.36	103	.30	.37	90	.26	.32	101	.29	.36	116	.34	.42	107	.31	.39	132	.38	.48
Peaches	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03
Tea	.002	.004	125	.01	.01	.....	.....	.....	125	.01	.01	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coffee	.05	.04	125	.05	.04	.....	.....	.....	125	.05	.04	125	.05	.04	.....	.....	.....	125	.05	.04
Total	.....	.....	.....	12.18	112.01	.....	12.47	157.55	.....	13.83	119.48	.....	13.30	116.86	.....	12.53	125.33	.....	11.57	114.95
September 27.																				
Bread	1.38	2.38	42	.58	1.00	40	.55	.95	79	1.09	1.88	74	1.02	1.76	105	1.45	2.50	74	1.02	1.76
Rolls	1.59	5.48	45	.72	2.47	45	.72	2.47	93	1.48	5.10	47	.75	2.58	98	1.56	5.37	90	1.43	4.93
Toast	1.76	2.36	82	1.44	1.94	87	1.53	2.05	88	1.55	2.08	72	1.27	1.70	68	1.20	1.60	86	1.51	2.05
Hot milk	.44	8.67	196	.86	16.99	196	.86	16.99	196	.86	16.99	196	.86	16.99	196	.86	16.99	196	.86	16.99
Fritters	1.25	22.38	75	.94	16.79	59	.74	13.20	71	.89	15.89	67	.84	14.99	.....	.....	.....	57	.71	12.76
Sirup	.....	.....	37	.....	.....	91	.....	.....	87	.....	.....	50	.....	.....	.....	.....	.....	33	.....	.....
Cream of wheat	.28	.07	200	.56	.14	200	.56	.14	.....	.....	.....	200	.56	.14	200	.56	.14	200	.56	.14
Lamb chops	4.25	7.62	67	2.85	5.11	54	2.30	4.11	64	2.72	4.88	72	3.06	5.49	56	2.38	4.27	68	2.89	5.18
Pot roast	6.18	7.38	36	2.22	2.66	32	1.98	2.36	32	1.98	2.36	30	1.85	2.21	34	2.10	2.51	30	1.85	2.21
Soup	.17	1.15	200	.34	2.30	200	.34	2.30	200	.34	2.30	200	.34	2.30	200	.34	2.30	200	.34	2.30
Butter	.11	85.31	42	.05	35.83	83	.09	70.81	66	.07	15.89	45	.05	38.39	71	.08	60.57	73	.08	62.28
Milk	.56	3.44	150	.84	5.16	100	.56	3.44	100	.56	3.44	100	.56	3.44	50	.28	1.72	.....	.....	.....
Sugar	.....	.....	35	.....	.....	48	.....	.....	100	.....	.....	73	.....	.....	70	.....	.....	31	.....	.....
Baked sweet potatoes	.17	1.65	189	.32	3.12	116	.20	1.91	154	.26	2.54	138	.23	2.28	126	.21	2.08	125	.21	2.09
Potato chips	.95	32.95	19	.18	6.26	19	.18	6.26	23	.22	7.58	24	.23	7.91	20	.19	6.59	27	.26	8.90
Tomatoes	.22	.07	132	.29	.09	159	.35	.11	138	.30	.10	172	.38	.12	138	.30	.10	.....	.....	.....
Peaches	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03	100	.07	.03
Ice cream	.64	5.32	105	.67	5.59	119	.76	6.33	109	.70	5.80	124	.79	6.60	115	.74	6.12	104	.67	5.53
Tea	.002	.004	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coffee	.04	.03	125	.05	.04	.....	.....	.....	125	.05	.04	125	.05	.04	.....	.....	.....	125	.05	.04
Total	.....	.....	.....	12.98	105.52	.....	11.79	133.46	.....	13.14	127.31	.....	12.91	106.97	.....	12.32	112.89	.....	12.51	127.19

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
September 28.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Bread	1.38	2.38	71	0.98	1.69	76	1.05	1.81	78	1.08	1.86	118	1.63	2.81	150	2.07	3.57	78	1.08	1.86
Rolls	1.59	5.48	40	.64	2.19	50	.80	2.74	19	.30	1.04	50	.80	2.74	86	1.37	4.71	88	1.40	4.82
Pie	.42	7.40	193	.81	14.28	181	.76	13.39	203	.85	15.02	172	.72	12.73	173	.73	12.80			
Muffins	1.03	13.61	126	1.30	17.15	135	1.39	18.37	137	1.41	18.65	140	1.44	19.05	140	1.44	19.05	152	1.57	20.69
Cream of wheat	.28	.07	200	.56	.14	200	.56	.14	200	.56	.14	200	.56	.14	200	.56	.14	200	.56	.14
Hamburg steak	4.03	6.85	55	2.22	3.77	56	2.26	3.84	51	2.06	3.49	56	2.26	3.84	57	2.30	3.90	53	2.14	3.63
Chipped beef	4.65	4.45				31	1.44	1.38	30	1.40	1.34	30	1.40	1.34	30	1.40	1.34	30	1.40	1.34
Soup	.22	1.57	210	.46	3.30	210	.46	3.30	210	.46	3.30	210	.46	3.30	210	.46	3.30	210	.46	3.30
Butter	.11	85.31	47	.05	40.10	136	.15	116.02	66	.07	56.30	86	.09	73.37	95	.10	81.04	91	.10	77.63
Milk	.56	3.44	150	.84	5.16	100	.56	3.44	200	1.12	6.88	100	.56	3.44	50	.28	1.72			
Sugar			27			33			80			53			26			13		
Corn	.79	.76	66	.52	.50				49	.39	.37	97	.77	.74	21	.17	.16	44	.35	.33
Boiled sweet potatoes	.14	1.41	107	.15	1.51	145	.20	2.04	141	.20	1.99	140	.20	1.97	131	.18	1.85	121	.17	1.71
Creamed potatoes	.38	2.89	170	.65	4.91	159	.60	4.60	156	.59	4.51	163	.62	4.71	150	.57	4.34	138	.52	3.99
Pears	.05	.12	97	.05	.12	198	.10	.24	124	.06	.15	102	.05	.12	79	.04	.09			
Muskmelon	.10	.01	130	.13	.01	85	.09	.01				214	.21	.02	151	.15	.02	126	.13	.01
Tea	.002	.004							125	.01	.01	125	.01	.01						
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				9.41	94.87		10.42	171.32		10.61	115.09		11.83	130.37		11.82	138.03		9.93	119.49
September 29.																				
Bread	1.38	2.38	47	.65	1.12	85	1.17	2.02	47	.65	1.12	127	1.75	3.02	112	1.55	2.67	94	1.30	2.24
Rolls	1.59	5.48	45	.72	2.47	44	.70	2.41	89	1.42	4.88	95	1.51	5.21	91	1.45	4.99	60	.95	3.29
Cake	1.46	4.85				36	.53	1.75	25	.37	1.21	25	.37	1.21	33	.48	1.60	28	.41	1.36
Pudding	1.08	11.07	60	.65	6.64	68	.73	7.53	72	.78	7.97							122	1.32	13.51
Sauce	.05	22.86	41	.02	9.37	47	.02	10.74	52	.03	11.89							92	.05	21.03
Biscuits	1.19	18.14	73	.87	13.24	88	1.05	15.96	88	1.05	15.96	100	1.19	18.14	95	1.13	17.23	112	1.33	20.32
Shredded wheat	1.67	1.48	29	.48	.43	29	.48	.43	32	.53	.47	30	.50	.44	31	.52	.46	32	.53	.47
Pork chops	5.91	8.26	47	2.78	3.88	52	3.07	4.30	39	2.30	3.22	46	2.72	3.80	48	2.84	3.96	40	2.36	3.30
Soup	.21	1.57	212	.45	3.33	212	.45	3.33	212	.45	3.33	212	.45	3.33	212	.45	3.33	212	.45	3.33
Butter	.11	85.31	55	.06	46.92	107	.12	91.28	92	.10	78.49	98	.11	83.60	92	.10	78.49	68	.07	58.01
Eggs	1.95	15.16				51	.99	7.73	50	.98	7.58	50	.98	7.58	50	.98	7.58	50	.98	7.58
Milk	.56	3.44	150	.84	5.16	100	.56	3.44	150	.84	5.16	100	.56	3.44	100	.56	3.44	75	.42	2.58
Sugar			57			20			83			58			29			10		

Baked sweet potatoes	.17	1.65	200	.34	3.30	156	.27	2.57	86	.15	1.42	231	.39	3.81	112	.19	1.85	132	.22	2.18
French fried potatoes	.73	5.48	56	.41	3.07	59	.43	3.23	60	.44	3.29	65	.47	3.56	59	.43	3.23	61	.45	3.34
Bananas	.16	.10	81	.13	.08	81	.13	.08	83	.13	.08	80	.13	.08	70	.11	.07	82	.13	.08
Pears	.05	.12	97	.05	.12	295	.15	.35	135	.07	.06	84	.04	.10	75	.04	.09			
Apple sauce	.04	.06	100	.04	.06	100	.04	.06	100	.04	.06	100	.04	.06	100	.04	.06	100	.04	.06
Tea	.002	.004	125	.01	.01				125	.01	.01	125	.01	.01						
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04						
Total				8.55	99.24		10.89	157.21		10.39	146.34		11.27	137.43		10.87	129.05		11.01	142.68
September 30.																				
Bread	1.38	2.38	66	.91	1.57	78	1.08	1.86	86	1.19	2.05	143	1.97	3.40	135	1.86	3.21	88	1.21	2.09
Rolls	1.59	5.48	44	.70	2.41	41	.65	2.25	48	.76	2.63	49	.78	2.69	94	1.49	5.15	51	.81	2.79
Pie	.34	10.82	190	.65	20.56	133	.45	14.39	295	1.00	31.92	130	.44	14.07				182	.62	19.69
Cookies	.98	11.09	27	.26	2.99	30	.29	3.33	32	.31	3.55	26	.25	2.88	23	.23	2.05			
Toast	1.76	2.36	98	1.72	2.31	103	1.81	2.43	103	1.81	2.43	90	1.58	2.12	104	1.83	2.45	100	1.76	2.36
Milk	.50	9.55	217	1.09	20.72	217	1.09	20.72	217	1.09	20.72	217	1.09	20.72	217	1.09	20.72	217	1.09	20.72
Oatmeal	.35	.54	200	.70	1.08	150	.53	.81	150	.53	.81	150	.53	.81	150	.53	.81	200	.70	1.08
Roast beef	4.40	10.91	85	3.74	9.27	91	4.11	9.93	91	4.11	9.93	85	3.74	9.27	84	3.70	9.16	89	3.92	9.71
Soup	.21	.19	212	.45	.40	212	.45	.40	212	.45	.40	212	.45	.40	212	.45	.40	212	.45	.40
Butter	.11	85.31	37	.04	31.56	103	.11	87.87	40	.04	34.12	55	.06	46.92	62	.07	52.89	71	.08	60.57
Milk	.56	3.44	150	.84	5.16	150	.84	5.16	200	1.12	6.88	100	.56	3.44	50	.28	1.72			
Sugar			27			24			124			76			70			10		
Mashed potatoes	.37	.28	120	.44	.34	152	.56	.43	120	.44	.34	142	.53	.40	116	.43	.32	152	.56	.43
Hashed potatoes	.46	4.79	93	.43	4.45	91	.42	4.36	111	.51	5.32	93	.43	4.45	93	.43	4.45	111	.51	5.32
Tomatoes	.27	2.65	100	.27	2.65	100	.27	2.65	100	.27	2.65	100	.27	2.65	100	.27	2.65	100	.27	2.65
Grapes	.18	.10	58	.10	.06	100	.18	.10	110	.20	.11	125	.23	.13	103	.19	.10			
Tea	.002	.004							125	.01	.01				125	.01	.01			
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				12.39	105.57		12.74	156.69		13.79	123.91		12.96	114.39		12.86	106.09		12.03	127.85
October 1.																				
Bread	1.38		36	.50		79	1.09		86	1.19		149	2.06		153	2.11		111	1.53	
Rolls	1.59		45	.72		45	.72		95	1.51		90	1.43		100	1.59		65	1.03	
Hominy	.39					190	.74		154	.60		167	.65		158	.62		210	.82	
Sirup						60			66			48			61					
Fritters	.74		70	.52		73	.54		70	.52								78	.58	
Sirup			65			90			101											
Force	1.95		20	.39		20	.39		20	.39		20	.39		20	.39				
Roast lamb	4.96		55	2.73		55	2.73		57	2.83		55	2.73		55	2.73		58	2.88	
Gravy	.35		30	.11		25	.09		26	.09		20	.07		15	.05		20	.07	
Hash	1.45					100	1.45		100	1.45		100	1.45		100	1.45		100	1.45	
Soup	.30		215	.65		215	.65		215	.65		215	.65		215	.65		215	.65	
Butter	.11		28	.03		71	.08		60	.07		54	.06		63	.07		52	.06	
Milk	.56		125	.70		300	1.68		200	1.12		100	.56		200	1.12				
Sugar			45			36						64			65			14		
Tomatoes	.22					158	.35		160	.35		135	.30		132	.29				
Baked sweet potatoes	.17		158	.27		117	.20		134	.23		147	.25		105	.18		102	.17	
Cucumbers	.07		118	.08		118	.08		118	.08		118	.08		118	.08				

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether ex-tract.	Amount of food.	Nitrogen.	Ether ex-tract.	Amount of food.	Nitrogen.	Ether ex-tract.	Amount of food.	Nitrogen.	Ether ex-tract.	Amount of food.	Nitrogen.	Ether ex-tract.	Amount of food.	Nitrogen.	Ether ex-tract.
October 1—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Bananas	0.16		92	0.15		93	0.15		93	0.15		89	0.14		78	0.12		70	0.11	
Tea	.002		150	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		200	.08					200	.08		200	.08					200	.08	
Total				6.94			10.94			11.32			10.91			11.46			9.44	
October 2.																				
Bread	1.38		49	.68		80	1.10		80	1.10		135	1.86		165	2.28		95	1.31	
Rolls	1.59		48	.76		47	.75		87	1.38		94	1.49		97	1.54		90	1.43	
Pie	.96		170	1.63		136	1.31		156	1.50		145	1.39					145	1.39	
Cake	1.55		22	.34		27	.42		27	.42		25	.39		22	.34		18	.28	
Toast	1.73		40	.69		59	1.02		78	1.35		63	1.09		58	1.00		63	1.09	
Oatmeal	.35		150	.53		150	.53		150	.53		150	.53		150	.53		200	.70	
Minced meat	4.47					80	3.58		74	3.31		70	3.13		71	3.17		76	3.40	
Beefsteak	4.79		57	2.73		58	2.78		54	2.59		57	2.73		55	2.63		55	2.63	
Soup	.27		220	.59		220	.59		220	.59		220	.59		220	.59		220	.59	
Milk	.56		100	.56		200	1.12		150	.84		100	.56		100	.56				
Sugar			47			29			92			69			58			11		
Butter	.11		51	.06		110	.12		64	.07		54	.06		80	.09		66	.07	
Mashed potatoes	.37		141	.52		119	.44		94	.35		128	.47		123	.46		107	.40	
French fried potatoes	.94		70	.66		64	.60		67	.63		57	.54		61	.57		67	.63	
Spinach	.41		104	.43		113	.46		108	.44		113	.46		113	.46		77	.32	
Oranges	.12		107	.13		107	.13		100	.12		112	.13		106	.13				
Pears	.04		101	.04		100	.04		75	.03		100	.04		90	.04		102	.04	
Tea	.002		170	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				10.41			14.99			15.31			15.52			14.40			14.34	
October 3.																				
Bread	1.38		92	1.27		70	.97		88	1.21		142	1.96		140	1.93		96	1.32	
Rolls	1.59		52	.83		51	.81		86	1.37		90	1.43		101	1.61		99	1.58	
Pie	.35		195	.68		192	.67		191	.67		181	.63		196	.69		142	.50	
Corn cake	1.13		100	1.13		104	1.18		105	1.19		97	1.10		100	1.13		123	1.39	

Boiled mush	.22		150	.33		150	.33		150	.33		150	.33		150	.33		200	.44	
Pot roast	6.02		55	3.31		56	3.37		57	3.43		55	3.31		55	3.31		55	3.31	
Gravy	.42		28	.12		29	.12		28	.12		25	.11		25	.11		25	.11	
Soup	.17		212	.36		212	.36		212	.36		212	.36		212	.36		212	.36	
Baked Beans	1.14		200	2.28		200	2.28		200	2.28		200	2.28		200	2.28		200	2.28	
Butter	.11		51	.06		97	.11		50	.06		71	.08		69	.08		70	.08	
Milk	.56		100	.56		100	.56		100	.56		100	.56		50	.28				
Sugar			36			16			85			40			50			8		
Mashed potatoes	.37		102	.38		110	.41		115	.43		100	.37		106	.39		101	.37	
Potato chips	1.11		22	.25		30	.34		23	.26		30	.34		30	.34		31	.35	
Cauliflower	.29		56	.16		60	.17		70	.20		54	.16		75	.22		71	.21	
Grapes	.13		190	.25		158	.21		188	.24		109	.14		185	.24				
Tea	.002		125	.01					125	.01					125	.01				
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				12.03			11.89			12.77			13.21			13.31			12.35	
October 4.																				
Bread	1.38		46	.63		70	.97		38	.52		110	1.52		122	1.68		94	1.30	
Rolls	1.59		43	.68		45	.72		87	1.38		87	1.38		87	1.38		87	1.38	
Toast	1.73		120	2.08		89	1.54		103	1.78		108	3.89		91	1.57		93	1.61	
Milk	.45		208	.94		208	.94		208	.94		208	.94		208	.94		208	.94	
Cream of wheat	.28		150	.42		150	.42		150	.42		150	.42		150	.42		200	.56	
Roast veal	5.31		55	2.92		55	2.92		52	2.76		55	2.92		55	2.92		55	2.92	
Gravy	.45		37	.17		33	.15		27	.12		34	.15		39	.18		42	.19	
Dressing	1.20		55	.66		60	.72		59	.71		44	.53		56	.67		50	.60	
Soup	.20		222	.44		222	.44		222	.44		222	.44		222	.44		222	.44	
Butter	.11		25	.03		101	.11		36	.04		56	.06		55	.06		60	.07	
Milk	.56		100	.56		125	.70		200	1.12		100	.56		50	.28				
Ice cream	.36		135	.30		140	.50		160	.58		125	.45					138	.50	
Sugar			45			45			140			71			65			23		
Boiled sweet potatoes	.14		98	.14		110	.15		132	.18		127	.18		164	.23		141	.20	
Codfish cakes	1.22		68	.83		68	.83		70	.85								70	.85	
Stewed tomatoes	.27		110	.30		110	.30		151	.33		141	.31		110	.30		110	.30	
Sliced tomatoes	.22		135	.30		149	.33								85	.14		122	.27	
Bananas	.16					170	.27		193	.31		171	.27					180	.29	
Tea	.002		200	.01					200	.01					200	.01		200	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				11.65			12.01			12.54			14.07			11.22			12.48	
October 5.																				
Bread	1.38		47	.65		78	1.08		96	1.32		147	2.03		122	1.68		115	1.59	
Rolls	1.59		45	.72		43	.68		95	1.51		96	1.53		102	1.62		95	1.51	
Muffins	1.08		115	1.24		65	.70		190	2.05		71	.77		164	1.77		222	2.40	
Cake	.70		57	.40					53	.37										
Pudding	.52		102	.53		118	.61		106	.55					116	.60				
Oatmeal	.35		150	.53		150	.53		150	.53		150	.53		150	.53		200	.70	
Roast pork	4.08		81	3.31		57	2.33		59	2.41		55	2.24		56	2.28		59	2.41	
Gravy	.25		27	.07		20	.05		24	.06		23	.06		24	.06		26	.07	

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
October 5—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Soup	0.39		216	0.84		216	0.84		216	0.84		216	0.84		216	0.84		216	0.84	
Butter	.11		50	.06		80	.09		90	.10		70	.08		90	.10		68	.07	
Eggs	2.03					80	1.62		80	1.62		80	1.62		80	1.62		80	1.62	
Milk	.56		100	.56		100	.56		150	.84		100	.56		50	.28				
Sugar			24			15			76			46			55			15		
Mashed potatoes	.37		125	.46		128	.47		116	.43		115	.43		105	.39		135	.50	
Hashed potatoes	.46		156	.72		101	.46		110	.51		113	.52		120	.55		115	.53	
Pears	.04		164	.07		187	.07		186	.07		171	.07		164	.07				
Apple sauce	.04		120	.05		120	.05		120	.05		120	.05		120	.05		120	.05	
Tea	.002								125	.01		125	.01		125	.01				
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				10.38			10.14			13.32			11.39			12.45			12.34	
October 6.																				
Bread	1.38		50	.69		75	1.04		78	1.08		108	1.49		117	1.61		88	1.21	
Rolls	1.59		88	1.40		45	.72		84	1.34		85	1.35		95	1.51		88	1.40	
Pie	.38		160	.61		296	1.12		175	.67					160	.61		160	.61	
Cake	.82		79	.65		76	.62		76	.62		79	.65		63	.52				
Biscuits	1.25		66	.83		48	.60		66	.83		44	.55		45	.56		54	.68	
Cream of wheat	.28		150	.42		150	.42		150	.42		150	.42		150	.42		200	.56	
Roast lamb	5.41		57	3.08		57	3.08		56	3.03		48	2.60		55	2.98		56	3.03	
Gravy	.47		29	.14		20	.09		19	.09		21	.10		25	.12		32	.15	
Minced lamb	3.93		35	1.38		35	1.38		35	1.38		35	1.38		35	1.38		35	1.38	
Soup	.19		220	.42		220	.42		220	.42		220	.42		220	.42		220	.42	
Cheese	4.43					22	.97		23	1.02								29	1.28	
Butter	.11		56	.06		88	.10		62	.07		62	.07		81	.09		44	.05	
Milk	.56		100	.56		100	.56		150	.84		100	.56		50	.28				
Sugar			35			30			110			90			54			23		
Mashed potatoes	.37		124	.46		43	.16		120	.44		156	.58		130	.48		117	.43	
Creamed potatoes	.38		125	.48		124	.46		130	.49		125	.48		126	.48		125	.48	
Corn	.79		125	.99								49	.39					58	.46	
Bananas	.16					80	.13		80	.13		80	.13					80	.13	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	

Tea	.002								125	.01					125	.01		125	.01	
Total				12.22			11.87			12.93			11.22			11.47			12.33	
October 7.																				
Bread	1.38		73	1.01		90	1.24		95	1.31		131	1.81		117	1.61		101	1.39	
Rolls	1.59		47	.75		41	.65		84	1.34		49	.78		91	1.45		91	1.45	
Cookies	1.03					16	.16		19	.20		18	.19		18	.19				
Peach shortcake	.43		286	1.23		225	.97		255	1.10		263	1.13					295	1.27	
Toast	1.73		58	1.00		87	1.51		103	1.78		85	1.47		100	1.73		48	.83	
Milk	.45		200	.90		200	.90		200	.90		200	.90		200	.90		200	.90	
Mush	.22		150	.33		150	.33		150	.33		150	.33		150	.33		200	.44	
Hamburg steak	4.05		57	2.31		53	2.15		54	2.19		55	2.23		52	2.11		54	2.19	
Ham	4.14		25	1.04		25	1.04		25	1.04		25	1.04		24	.99				
Soup	.18		212	.38		212	.38		212	.38		212	.38		212	.38		212	.38	
Butter	.11		52	.06		85	.09		61	.07		88	.10		70	.08		67	.07	
Milk	.56		100	.56		100	.56		150	.84		100	.56		50	.28				
Sugar			34			30			140			65			41			28		
Mashed potatoes	.37		109	.40		118	.44		106	.39		122	.45		113	.42		102	.38	
Fried potatoes	.53		50	.27		60	.32		57	.30		52	.28		56	.30		57	.30	
Spinach	.41		115	.47		110	.45		105	.43		104	.43		104	.43		100	.41	
Oranges	.12		117	.14		125	.15		110	.13		110	.13		114	.13		120	.14	
Jelly	.07					56	.04		80	.06		77	.05		67	.05				
Tea	.002								125	.01		125	.01							
Coffee	.04		125	.05					125	.05		125	.05							
Total				10.90			11.38			12.85			12.32			11.38			10.15	
October 8.																				
Bread	1.35	1.34	84	1.13	1.12	81	1.09	1.08	89	1.20	1.19	130	1.76	1.74	145	1.96	1.94	96	1.30	1.29
Rolls	1.67	6.26	44	.73	2.75	45	.75	2.82	96	1.60	6.00	95	1.59	5.95	99	1.65	6.20	90	1.50	5.63
Pie	1.97	11.58	197	.73	22.81	163	.60	18.87	339	1.25	39.26							162	.60	18.76
Muffins	1.09	12.42	121	1.32	15.03	118	1.29	14.65	131	1.43	16.27	107	1.17	13.27	108	1.18	13.41	115	1.25	14.28
Pettijohn	.26	.18	150	.39	.27	150	.39	.27	100	.26	.18	150	.39	.27	150	.39	.27	200	.52	.36
Roast beef	4.35	4.59	89	3.87	4.08	84	3.65	3.85	79	3.44	3.62	84	3.36	3.86	87	3.79	4.00	78	3.39	3.58
Soup	.16	2.95	221	.35	6.52	221	.35	6.52	221	.35	6.52	221	.35	6.52	221	.35	6.52	221	.35	6.52
Butter	.11	85.31	68	.07	58.01	99	.11	84.46	88	.09	75.07	78	.08	66.54	95	.10	81.04	72	.08	61.42
Milk	.54	3.70	150	.81	5.55	200	1.08	7.40	200	1.08	7.40	100	.54	3.70	50	.27	1.85			
Sugar			54			25			95			78			32			20		
Mashed potatoes	.41	.65	123	.50	.80	112	.46	.73	133	.55	.86	136	.56	.88	146	.60	.95	158	.65	1.03
Hashed potatoes	.46	4.55	97	.45	4.41	101	.46	4.59	84	.39	3.82	95	.44	4.32	122	.56	5.55	109	.50	4.96
Onions	.14	2.63	123	.17	3.23	92	.13	2.42				114	.16	3.00						
Celery	.20	.06	32	.06	.02	29	.06	.02	40	.08	.02	31	.06	.02	37	.07	.02	25	.05	.02
Grapes	.04	.10	159	.06	.16	126	.05	.13	124	.05	.12	127	.05	.13	100	.04	.10	129	.05	.13
Bananas	.16	.12				80	.13	.10	80	.13	.10	80	.13	.10	80	.13	.10	80	.13	.10
Tea	.002	.001	125	.01	.01				125	.01	.01	125	.01	.01	125	.01	.01	125	.01	.01
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04						
Total				10.70	124.81		10.60	147.91		11.96	160.48		11.00	110.35		11.10	121.96		10.38	118.09

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
October 9.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Bread	1.35	1.34	99	1.34	1.33	83	1.12	1.11	81	1.09	1.09	119	1.61	1.59	150	2.03	2.01	113	1.53	1.51
Rolls	1.67	6.26	42	.70	2.63	46	.77	2.88	94	1.57	5.88	95	1.59	5.95	95	1.59	5.95	85	1.42	5.32
Cake	.64	7.80	71	.45	5.54	84	.54	6.55	77	.49	6.00	73	.47	5.69	72	.46	5.62			
Toast	1.71	2.58	50	.86	1.29	47	.80	1.21	39	.67	1.00	34	.58	.88	42	.72	1.08	45	.77	1.16
Cream of wheat	.28	.19	150	.42	.29	150	.42	.29	100	.28	.19	150	.42	.29	150	.42	.29	200	.56	.38
Pudding	.98	10.46	75	.74	7.85	83	.81	8.68	168	1.65	17.57							166	1.63	17.36
Sauce	.04	25.35	45	.02	11.41	47	.02	11.91	80	.03	20.28							80	.03	20.28
Minced meat	3.78	15.57	87	1.40	5.76	31	1.17	4.83	37	1.40	5.76	36	1.36	5.60	30	1.13	4.67	30	1.13	4.67
Beefsteak	4.55	5.78	56	2.55	3.24	58	2.64	3.35	58	2.64	3.35	58	2.64	3.35	58	2.64	3.35	57	2.59	3.29
Soup	.10	2.05	224	.22	4.59	224	.22	4.59	224	.22	4.59	224	.22	4.59	224	.22	4.59	224	.22	4.59
Butter	.11	85.31	53	.06	45.21	102	.11	87.02	39	.04	34.07	66	.07	56.30	102	.11	87.02	61	.07	52.04
Milk	.54	3.70	200	1.08	7.40	200	1.08	7.40	150	.81	5.55	100	.54	3.70	75	.41	2.77	50	.27	1.85
Sugar			34			22			124			70			65					
Mashed potatoes	.41	.65	100	.41	.65	120	.49	.78	109	.45	.71	142	.58	.92	120	.49	.78	135	.55	.88
French fried potatoes	.70	7.37	78	.55	5.75	74	.52	5.45	65	.46	4.79	55	.39	4.05	63	.44	4.64	38	.27	2.80
Tomatoes	.22	.07	165	.36	.11	180	.40	.13	163	.36	.11	160	.35	.11	174	.38	.12			
Spinach	.41	3.49				204	.84	7.12	121	.50	4.22	91	.37	3.18	95	.39	3.31	92	.38	3.21
Apples	.02	.17	78	.02	.13	52	.01	.09	61	.01	.10	79	.02	.13	70	.01	.12			
Tea	.002	.004	125	.01	.01				125	.01	.01	125	.01	.01	125	.01	.01	125	.01	.01
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04						
Total				11.24	103.23		11.96	153.39		12.73	115.31		11.27	96.38		11.45	126.33		11.43	119.35
October 10.																				
Bread	1.35	1.34	115	1.55	1.54	84	1.13	1.12	82	1.11	1.10	130	1.76	1.74	135	1.82	1.81	100	1.35	1.34
Rolls	1.67	6.26	47	.78	2.94	46	.78	2.88	89	1.49	5.57	88	1.47	5.51	91	1.52	5.70	87	1.45	5.45
Crullers	1.00	22.81	64	.64	14.60	57	.57	13.00	60	.60	13.69	55	.55	12.55	57	.57	13.00			
Corn bread	1.13	13.46	69	.78	9.29	82	.93	11.03	162	1.83	21.82				78	.88	10.50	98	1.11	13.19
Oatmeal	.41	.36	150	.62	.54	150	.62	.54	100	.41	.36	150	.62	.54	150	.62	.54	200	.82	.72
Pudding	.31	5.83	122	.38	7.11	114	.35	6.65	122	.38	7.11	139	.43	8.10	147	.46	8.57	152	.47	8.86
Pot roast	5.76	6.10	57	3.28	3.48	52	3.00	3.17	57	3.28	3.48	51	2.94	3.11	52	3.00	3.17	56	3.23	3.42
Gravy	.59	2.10	26	.15	.55	35	.21	.73	26	.15	.55	30	.18	.63	26	.15	.55	28	.17	.59
Soup	.34	1.43	225	.77	3.22	225	.77	3.22	225	.77	3.22	225	.77	3.22	225	.77	3.22	225	.77	3.22
Baked beans	1.20	2.40	200	2.40	4.80	200	2.40	4.80	200	2.40	4.80	200	2.40	4.80	200	2.40	4.80	200	2.40	4.80
Butter	.11	85.31	55	.06	46.92	109	.12	92.99	76	.07	64.83	54	.06	46.07	82	.09	69.95	58	.06	49.48

Milk	.54	3.70	200	1.08	7.40	125	.68	4.62	200	1.08	7.40	100	.54	3.70	150	.81	5.55	.....	.....	.....
Sugar	.....	.....	51	.....	.....	16	.....	.....	82	.....	.....	48	.....	.....	64	.....	.....	17	.....	.....
Mashed potatoes	.41	.65	140	.57	.91	130	.53	.85	130	.53	.85	120	.49	.78	133	.55	.86	133	.55	.86
Creamed potatoes	.33	6.28	116	.38	7.28	153	.50	9.61	97	.32	6.09	152	.50	9.55	136	.45	8.54	90	.30	5.65
Cauliflower	.29	5.61	97	.28	5.43	84	.24	4.71	82	.24	4.60	69	.20	3.87	86	.25	4.82	64	.19	3.59
Grapes	.04	.10	93	.04	.09	87	.03	.09	102	.04	.10	125	.05	.13	93	.04	.09	91	.04	.09
Tea	.002	.004	125	.01	.01	.....	.....	.....	125	.01	.01	.....	.....	.....	125	.01	.01	125	.01	.01
Coffee	.04	.03	125	.05	.04	.....	.....	.....	125	.05	.04	125	.05	.04	.....	.....	.....	125	.05	.04
Total	.....	.....	.....	13.82	116.15	.....	12.86	160.01	.....	14.76	145.62	.....	13.01	104.34	.....	14.39	141.68	.....	12.97	101.31
October 11.																				
Bread	1.35	1.34	100	1.35	1.34	78	1.05	1.04	85	1.15	1.14	68	.92	.92	126	1.70	1.69	93	1.26	1.25
Rolls	1.67	6.26	48	.80	3.00	42	.70	2.63	88	1.47	5.51	.....	.....	.....	86	1.44	5.38	89	1.49	5.57
Cake	1.05	12.62	42	.44	5.30	51	.54	6.44	51	.54	6.44	.....	.....	.....	.....	.....	.....	40	.42	5.05
Toast	1.71	2.58	55	.94	1.42	56	.96	1.44	55	.94	1.42	52	.89	1.34	58	.99	1.50	41	.70	1.06
Milk	.51	7.63	205	1.05	15.64	205	1.05	15.64	205	1.05	15.64	205	1.05	15.64	205	1.05	15.64	205	1.05	15.64
Oatmeal	.41	.36	150	.62	.54	150	.62	.54	100	.41	.36	150	.62	.54	150	.62	.54	200	.82	.72
Roast veal	5.68	2.13	86	4.88	1.83	92	5.23	1.96	92	5.23	1.96	90	5.11	1.91	82	4.66	1.75	83	4.71	1.77
Dressing	.73	9.02	53	.39	4.78	48	.35	4.33	36	.26	3.25	41	.30	3.70	43	.31	3.88	36	.26	3.25
Gravy	.75	7.38	22	.17	1.62	39	.29	2.88	35	.26	2.58	28	.21	2.07	27	.20	1.99	20	.15	1.48
Soup	.22	1.73	202	.44	3.49	202	.44	3.49	202	.44	3.49	202	.44	3.49	202	.44	3.49	202	.44	3.49
Butter	.11	85.31	46	.05	39.24	95	.10	81.04	47	.05	40.10	46	.05	39.24	60	.07	51.19	60	.07	51.19
Milk	.54	3.70	150	.81	5.55	100	.54	3.70	150	.81	5.55	100	.54	3.70	150	.81	5.55	.....	.....	.....
Ice cream	.59	3.22	97	.57	3.12	104	.61	3.35	101	.60	3.25	97	.57	3.12	.....	.....	.....	118	.70	3.80
Sugar	.....	.....	32	.....	.....	36	.....	.....	133	.....	.....	55	.....	.....	106	.....	.....	31	.....	.....
Celery	.20	.06	20	.04	.01	21	.04	.01	18	.04	.01	30	.06	.02	23	.05	.01	25	.05	.01
Hashed potatoes	.42	6.28	132	.55	8.29	108	.45	6.78	111	.47	6.96	188	.32	10.55	112	.47	7.03	98	.41	6.15
Baked sweet potatoes	.17	5.61	194	.33	10.88	135	.23	7.57	.....	.....	.....	97	.41	6.09	.....	.....	.....	.....	.....	.....
Tomatoes	.22	.07	131	.29	.09	158	.35	.11	181	.40	.13	131	.29	.09	186	.41	.13	.....	.....	.....
Oranges	.12	.10	100	.12	.10	98	.12	.10	109	.13	.11	104	.12	.10	96	.12	.10	111	.13	.11
Grapes	.04	.10	.....	.....	.....	50	.02	.05	119	.05	.12	63	.03	.06	61	.02	.06	.....	.....	.....
Jelly	.07	.....	25	.02	.....	35	.02	.....	21	.01	.....	21	.01	.....	27	.02	.....	20	.01	.....
Tea	.002	.004	.....	.....	.....	.....	.....	.....	125	.01	.01	.....	.....	.....	125	.01	.01	.....	.....	.....
Coffee	.04	.03	125	.05	.04	.....	.....	.....	125	.05	.04	125	.05	.04	.....	.....	.....	125	.05	.04
Total	.....	.....	.....	13.91	106.28	.....	13.71	143.10	.....	14.37	98.07	.....	11.99	92.62	.....	13.39	99.94	.....	12.72	100.58
October 12.																				
Bread	1.35	1.34	90	1.22	1.21	80	1.08	1.07	111	1.50	1.49	122	1.65	1.63	108	1.46	1.45	118	1.59	1.58
Rolls	1.67	6.26	45	.75	2.82	45	.75	2.82	90	1.50	5.63	90	1.50	5.63	83	1.39	5.20	94	1.57	5.88
Cake	.92	13.67	52	.48	7.11	33	.30	4.51	55	.51	7.41	50	.46	6.84	.....	.....	.....	.....	.....	.....
Muffins	1.19	12.93	126	1.50	16.29	109	1.30	14.09	133	1.58	17.20	.....	.....	.....	123	1.46	16.81	117	1.39	16.00
Cream of wheat	.28	.19	150	.42	.29	150	.42	.29	100	.28	.19	150	.42	.29	150	.42	.29	200	.56	.38
Pudding	.77	2.84	109	.84	3.10	129	1.09	3.66	111	.85	3.15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Roast pork	5.83	5.85	90	5.25	5.26	55	3.21	3.22	88	5.13	5.14	57	3.32	3.33	57	3.32	3.33	53	3.09	3.10
Gravy	.28	5.76	23	.06	1.32	25	.07	1.44	31	.09	1.78	28	.08	1.61	27	.08	1.56	22	.06	1.27
Soup	.15	1.48	205	.31	3.03	205	.31	3.03	205	.31	3.03	205	.31	3.03	205	.31	3.03	205	.31	3.03
Butter	.11	85.31	53	.06	45.21	120	.13	102.47	95	.10	81.04	65	.07	55.45	86	.09	73.37	78	.08	66.54
Eggs	2.09	22.68	.....	.....	.....	64	1.34	14.51	.....	.....	.....	60	1.25	13.61	60	1.25	13.61	51	1.07	13.57

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
October 12—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Milk	0.54	3.70	150	0.81	5.55	200	1.08	7.40	200	1.08	7.40	100	0.54	3.70	50	0.27	1.85			
Sugar			33			27			117			81			65			24		
Mashed potatoes	.41	.65	120	.49	.78	110	.45	.72	103	.42	.67	114	.47	.74	130	.53	.85	126	0.52	0.82
Potato chips	1.14	27.75	19	.22	5.27	17	.19	4.72	24	.27	6.66	17	.19	4.72	18	.21	5.00			
Bananas	.16	.12				80	.13	.10	80	.13	.10	80	.13	.10				80	.13	.10
Grapes	.04	.10				268	.11	.27	81	.03	.08	112	.04	.11	99	.04	.10			
Apple sauce	.04	.06	150	.06	.09	150	.06	.09	150	.06	.09	150	.06	.09	150	.06	.09	150	.06	.09
Tea	.002	.004	75	.01	.01				125	.01	.01	125	.01	.01	125	.01	.01	125	.01	.01
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				12.53	97.38		12.02	164.41		13.90	141.11		10.55	100.93		10.90	126.55		10.49	112.41
October 13.																				
Bread	1.35	1.34	97	1.31	1.30	87	1.17	1.16	66	.89	.88	134	1.81	1.80	144	1.94	1.93	100	1.35	1.34
Rolls	1.67	6.26	53	.89	3.32	49	.82	3.07	90	1.50	5.63	95	1.59	5.95	88	1.47	5.50	95	1.59	5.95
Pie	.41	12.26	139	.57	17.04	137	.56	16.80	151	.62	18.53	148	.61	18.14	151	.62	18.51	135	.55	16.55
Cake	.74	13.67	58	.43	7.93	65	.48	8.88	71	.53	9.71	70	.52	9.57						
Hominy	.30	4.44	205	.62	9.10	180	.54	8.00	176	.53	7.81	186	.56	8.25	287	.86	12.74	76	.23	3.37
Sirup			48			110			100			52			47					
Oatmeal	.41	.36	150	.62	.54	150	.62	.54	100	.41	.36	150	.62	.54	150	.62	.54	200	.82	.72
Roast lamb	5.33	6.38	55	2.93	3.51	58	3.09	3.70	57	3.04	3.63	50	2.67	3.19	50	2.67	3.19	55	2.93	3.51
Hash	1.90	13.28	100	1.90	13.28	100	1.90	13.28	100	1.90	13.28	100	1.90	13.28	100	1.90	13.28	100	1.90	13.28
Soup	.32	3.60	228	.73	8.21	228	.73	8.21	228	.73	8.21	228	.73	8.21	228	.73	8.21	228	.73	8.21
Cheese	4.11	32.86				19	.78	6.24	31	1.27	10.19	28	1.15	9.20	27	1.11	8.87	30	1.23	9.86
Butter	.11	85.31	46	.05	39.24	76	.08	64.84	50	.06	42.66	61	.07	52.04	77	.08	65.69	51	.06	43.51
Milk	.54	3.70	150	.81	5.55	100	.54	3.70	150	.81	5.55	100	.54	3.70	50	.27	1.85			
Sugar			29			25			86			44			37			14		
Lettuce	.08	.10	37	.03	.04	33	.03	.03				36	.03	.04	38	.03	.04			
Mashed potatoes	.41	.65	125	.51	.82	108	.44	.70	122	.50	.79	90	.37	.59	102	.42	.66	104	.43	.68
Turnips	.11	.64	107	.12	.68	210	.22	1.34	97	.11	.62	102	.11	.65				92	.10	.59
Grapes	.04	.10				103	.04	.10	103	.04	.10	123	.05	.12	104	.04	.10			
Tea	.002	.004							125	.01	.01							125	.01	.01
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				11.57	110.60		12.04	140.59		13.00	128.00		13.38	135.31		12.76	141.11		11.98	107.62

October 14.																				
Bread	1.35	1.34	86	1.16	1.15	83	.12	1.11	102	1.38	1.37	152	2.05	2.04	111	1.50	1.49	105	1.42	1.41
Rolls	1.67	6.26	46	.77	2.88	45	.75	2.82	91	1.52	5.70	92	1.54	5.76	105	1.75	6.57	91	1.52	5.70
Crullers	.91	24.62				69	.63	16.99	62	.56	15.26				55	.50	13.54			
Biscuits	1.21	15.81	70	.85	11.07	63	.76	9.96	111	1.34	17.55	84	1.02	13.28	69	.83	10.91	68	.82	10.75
Pettijohn	.26	.18	150	.39	.27	150	.39	.27	100	.26	.18	150	.39	.27	150	.39	.27	200	.52	.36
Ham	4.22	13.09	30	1.27	3.93	28	1.18	3.67	30	1.27	3.93	31	1.31	4.06	29	1.22	3.80	17	.72	2.23
Hamburg steak	4.60	6.66	55	2.53	3.66	58	2.67	3.86	58	2.67	3.86	56	2.58	3.73	56	2.58	3.73	57	2.62	3.80
Soup	.36	2.03	207	.75	4.20	207	.75	4.20	207	.75	4.20	207	.75	4.20	207	.75	4.20	207	.75	4.20
Butter	.11	85.31	67	.07	57.16	93	.10	79.34	86	.09	73.37	89	.09	75.93	101	.11	86.16	75	.08	63.98
Milk	.54	3.70	100	.54	3.70	150	.81	5.55	200	1.08	7.40	100	.54	3.70	125	.68	4.63			
Ice cream	.46	12.70	122	.56	15.49	126	.58	16.00	102	.47	12.95	138	.63	17.53	111	.51	14.10	132	.61	16.76
Sugar			35			29			64			51			48			22		
Mashed potatoes	.43	3.38	95	.41	3.21	102	.44	3.45	72	.31	2.43	122	.52	4.12	130	.56	4.39	126	.54	4.26
Baked sweet potatoes	.17	5.61	151	.26	8.47	142	.24	7.97	71	.12	3.98	190	.32	10.66	142	.24	7.97	249	.42	13.97
Spinach	.41	3.62	92	.38	3.33	163	.67	5.90	118	.48	4.27	96	.39	3.48	98	.40	3.55	98	.40	3.55
Bananas	.16	.12				96	.15	.12	90	.15	.11	96	.15	.12	83	.13	.10	90	.15	.11
Tea	.002	.004	125	.01	.01				125	.01	.01				125	.01	.01	125	.01	.01
Coffee	.04	.03	125	.05	.04				125	.05	.64	125	.05	.04				125	.05	.04
Total				10.00	118.57		5.59	161.21		12.51	156.61		12.33	148.92		12.16	165.42		10.63	131.13
October 15.																				
Bread	1.35		107	1.44		99	1.34		98	1.32		135	1.82		140	1.89		118	1.59	
Rolls	1.67		49	.82		49	.82		103	1.72		97	1.62		97	1.62		100	1.67	
Apple pie	.43		150	.65		118	.51		160	.69		130	.56		156	.67		166	.71	
Muffins	1.15		122	1.40		133	1.53		135	1.55		102	1.17		84	.97		99	1.14	
Oatmeal	.41		150	.62		150	.62		100	.41		150	.62		150	.62		200	.82	
Veal cutlet	4.00		53	2.12		60	2.40		60	2.40		57	2.28		58	2.32		55	2.20	
Chipped beef	4.69		17	.80		19	.89		23	1.08		22	1.03		16	.75		22	1.03	
Parsnip soup	.26		203	.53		203	.53		203	.53		203	.53		203	.53		203	.53	
Stewed oysters	.76					216	1.64		216	1.64		216	1.64		216	1.64		216	1.64	
Butter	.11		68	.07		114	.13		92	.10		81	.09		62	.07		67	.07	
Milk	.54		100	.54		100	.54		150	.81		100	.54		50	.27				
Sugar			50			35			105			58			31			46		
Mashed potatoes	.41		117	.48		130	.53		115	.47		118	.48					127	.52	
Hashed potatoes	.46		97	.45		81	.37		58	.27		105	.48		107	.49		105	.48	
Onions	.14		122	.17		107	.15					115	.16							
Oranges	.12		119	.14		104	.12		100	.12		102	.12		101	.12		120	.14	
Grape jelly	.05		48	.02		92	.05		50	.03		72	.04		47	.02		38	.02	
Tea	.002		125	.01					125	.01								125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				10.31			12.17			13.20			13.23			11.98			12.62	
October 16.																				
Bread	1.35		98	1.32		93	1.26		88	1.19		119	1.61		146	1.97		98	1.32	
Rolls	1.67		46	.77		47	.78		95	1.59		87	1.45		91	1.52		70	1.17	
Toast	1.71		46	.79		59	1.01		62	1.06		55	.94		40	.68		62	1.06	

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
October 16—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Buttered milk	0.44		205	0.90		205	0.90		205	0.90		205	0.90		205	0.90		205	0.90	
Cream of wheat	.28		150	.42		150	.42		100	.28		150	.42		150	.42		200	.56	
Steak	4.80		50	2.40		55	2.64		49	2.35		51	2.45		56	2.69		56	2.69	
Lamb chops	4.80		40	1.92		29	1.39		33	1.58		35	1.68		33	1.58				
Vegetable soup	.09		231	.21		231	.21		231	.21		231	.21		231	.21		231	.21	
Custard	.77					387	2.98		394	3.03										
Butter	.11		56	.06		98	.11		77	.08		75	.08		94	.10		47	.05	
Milk	.54		100	.54		100	.54		150	.81		100	.54		100	.54				
Sugar			17			25			85			64			99			18		
Mashed potatoes	.41		116	.48		117	.48		86	.35		124	.51		105	.43		104	.43	
Baked sweet potatoes	.17		81	.14		87	.15		105	.18		110	.19		83	.14				
Carrots	.09		100	.09		105	.09					103	.09		97	.09		103	.09	
Cream sauce	.49		50	.25		56	.27					51	.25		64	.31		50	.25	
Bananas	.16					113	.18		102	.16		107	.17					88	.14	
Pears	.04					56	.02		82	.03		214	.09							
Tea	.002								125	.01					125	.01				
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				10.34			13.43			13.86			11.63			11.59			8.92	
October 17.																				
Bread	1.35		105	1.42		93	1.26		80	1.08		129	1.74					90	1.22	
Rolls	1.67		22	.37		43	.72		42	.70		43	.72		91	1.52		88	1.47	
Apple pie	.47		147	.69		147	.69		120	.56					155	.73		133	.63	
Crullers	.99					55	.54		62	.61										
Corn bread	1.12		81	.91		100	1.12		101	1.13		107	1.20		97	1.09		113	1.27	
Oatmeal	.41		150	.62		150	.62		100	.41		150	.62		150	.62		200	.82	
Pot roast	5.80		59	3.42		52	3.02		23	1.33		56	3.25		56	3.25		50	2.90	
Gravy	.45		30	.14		32	.14		28	.13		32	.14		34	.15		30	.14	
Rice soup	.12		225	.27		225	.27		225	.27		225	.27		225	.27		225	.27	
Baked beans	1.27		200	2.54		200	2.54		300	3.81		100	1.27		100	1.27		100	1.27	
Butter	.11		30	.03		78	.09		50	.06		16	.02		57	.06		39	.04	
Milk	.54		100	.54		100	.54		150	.81		100	.54		50	.27				
Sugar			33			27			86			55			57			37		
Mashed potatoes	.41		116	.48		135	.55		124	.51		103	.42					132	.54	

French fried potatoes	.70			85	.60	70	.49	75	.53	55	.39	90	.63
Cauliflower	.29	185	.54	96	.28	89	.26	80	.23	116	.34	88	.26
Oranges	.12	100	.12	106	.13	107	.13	100	.12	113	.14	120	.14
Tea	.002					125	.01			125	.01		
Coffee	.04	125	.05			125	.05	125	.05			125	.05
Total			12.14		13.11		12.35		11.12		10.11		11.65
October 18.													
Bread	1.35			65	.88	83	1.12	70	.95	116	1.57	95	1.28
Rolls	1.67	44	.73	51	.85	46	.77	45	.75	86	1.44	77	1.29
Macaroons	1.31	29	.38	27	.35	31	.41	25	.33			25	.33
Toast	1.71	57	.97	63	1.08	96	1.64	48	.82	54	.92	58	.99
Hot milk	.41			213	.87	213	.87	213	.87	213	.87	213	.87
Cream of wheat	.28	150	.42	150	.42	100	.28	150	.42	150	.42	200	.56
Roast veal	6.03	80	4.83	79	4.77	83	5.01	85	5.13	78	4.71	77	4.65
Dressing	.73	73	.53	94	.69	82	.60	80	.58	80	.58	80	.58
Gravy	.61	40	.24	28	.17	23	.14	27	.16	24	.15	29	.18
Tomato soup	.22	211	.46	211	.46	211	.46	211	.46	211	.46	211	.46
Ice cream	.34	135	.46	131	.45	102	.35	135	.46			120	.41
Butter	.11	10	.01	67	.07	42	.05	5	.01	32	.04	20	.02
Milk	.54	115	.62	100	.54	150	.81	100	.54	50	.27		
Sugar		31		23		108		50		63		15	
Baked sweet potatoes	.17	130	.22	137	.23	101	.17	118	.20	67	.11	139	.24
Fried potatoes	.46	87	.40	76	.35	74	.34	115	.53	69	.32	72	.33
Tomatoes	.22	171	.38	177	.39	175	.39	183	.40	155	.34		
Bananas	.16			119	.19	97	.16	103	.16	107	.17	120	.19
Grapes	.04			121	.05	86	.03	148	.06	84	.03	59	.02
Tea	.002	75	.01			125	.01						
Coffee	.04	125	.05			125	.05	125	.05			125	.05
Total			10.71		12.81		13.66		12.88		12.40		12.45
October 19.													
Bread	1.35	50	.68	94	1.27	103	1.39	115	1.55	125	1.95	95	1.28
Rolls	1.67	33	.55	46	.77	45	.75			89	1.49	38	.63
Muffins	1.20	113	1.36	52	.62	185	2.22	117	1.40	115	1.38	113	1.36
Pettijohn	.26			150	.39	100	.26	150	.39	150	.39	200	.52
Roast beef	4.16	85	3.54	78	3.25	83	3.45	86	3.58	80	3.32	87	3.62
Beef soup	.21	235	.49	235	.49	235	.49	235	.49	235	.49	234	.49
Cottage pudding	1.01	98	.99	89	.90	84	.85					136	1.37
Sauce	.04	35	.01	30	.01	33	.01					60	.02
Butter	.11	37	.04	64	.07	100	.11	54	.06	45	.05	45	.05
Milk	.54	50	.27	100	.54	150	.81	100	.54	75	.41		
Sugar		14		23		120		74		90		46	
Mashed potatoes	.41	111	.46	104	.43	96	.39	111	.46	111	.46	98	.40
Creamed potatoes	.34	105	.36	137	.47	124	.42	112	.38	114	.39		
Turnips	.11	100	.11	117	.13	120	.13	141	.16			130	.14
Bananas	.16			111	.18	93	.15	102	.16				
Grapefruit	.11	121	.13	154	.17	153	.17	196	.22	144	.16	138	.15

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
October 19—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Tea	0.002								125	0.01		125	0.01		125	0.01				
Coffee	.04		125	0.05					125	.05		125	.05					125	0.05	
Total				9.04			9.69			11.66			9.45			10.50			10.08	
October 20.																				
Bread	1.35		49	.66		83	1.12		80	1.08		108	1.46		140	1.89		95	1.28	
Rolls	1.67		29	.48		45	.75		43	.72		44	.73		88	1.47		42	.70	
Apple pie	.34		120	.41		151	.51		198	.67		140	.48		165	.56		140	.48	
Hominy	.30		187	.56		220	.66		192	.58		225	.68		423	1.27		182	.55	
Sirup			40			70			76			59								
Cream of wheat	.28		150	.42		150	.42		100	.28		150	.42		150	.42		200	.56	
Potato soup	.33		220	.73		220	.73		220	.73		220	.73		220	.73		220	.73	
Veal cutlet	4.65		58	2.70		59	2.74		50	2.33		52	2.43		56	2.60		55	2.56	
Beef hash	2.13		100	2.13		108	2.30		107	2.28		103	2.19		105	2.24		108	2.30	
Cheese	4.03					20	.81		25	1.01		29	1.17		24	.97		25	1.01	
Butter	.11		13	.01		55	.06		36	.04		43	.05		60	.07		29	.03	
Milk	.54		75	.41		100	.54		150	.81		100	.54		50	.27				
Sugar			49			11			121			77			37			41		
Mashed potatoes	.41		142	.58		113	.46		119	.49		124	.52		119	.49		117	.48	
Tomatoes	.22		162	.36		142	.31		155	.34		195	.43		152	.33		173	.38	
Apples	.02		120	.02		115	.02		149	.03		144	.03		120	.02		94	.02	
Grapes	.04					78	.03		77	.03		149	.06		60	.02		76	.03	
Tea	.002								125	.01		125	.01							
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				9.52			11.46			11.48			11.98			13.35			11.16	
October 21.																				
Bread	1.35		89	1.20		95	1.28		94	1.27		108	1.46		140	1.89		80	1.08	
Rolls	1.67		48	.80		42	.70		48	.80		46	.77		90	1.50		44	.73	
Lemon meringue pie	.53		170	.90		163	.86		178	.94		154	.82		179	.95		177	.94	
Cake	.97					68	.66													
Toast	1.71		75	1.28		50	.86		94	1.61		65	1.11		57	.97		63	1.08	

Cream of wheat	.28		150	.42		150	.42		100	.28		150	.42		150	.42		200	.56	
Rice	.22		106	.23		112	.25		176	.39								114	.25	
Veal soup	.14		239	.33		239	.33		239	.33		239	.33		239	.33		239	.33	
Hamburg steak	4.06		58	2.35		60	2.44		57	2.31		60	2.44		55	2.23		59	2.40	
Chipped beef	5.35		20	1.07		20	1.07		20	1.07		20	1.07		20	1.07		20	1.07	
Escalloped oysters	1.39		105	1.46		125	1.74		137	1.90		170	2.36		118	1.64		140	1.95	
Butter	.11		68	.07		102	.11		82	.09		64	.07		100	.11		55	.06	
Milk	.54		100	.54		250	1.35		275	1.49		125	.68		100	.54				
Sugar			35			44			101			50			54			13		
Mashed potatoes	.41		190	.78		108	.44		120	.49		104	.43		103	.42		96	.39	
French fried potatoes	.70		65	.46		69	.48		66	.46		53	.37		57	.40		53	.37	
Bananas	.16					110	.18		105	.17		102	.16					110	.18	
Tea	.002		125	.01					125	.01		125	.01		125	.01		125	.01	
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				11.95			13.17			13.66			12.55			12.48			11.45	
October 22.																				
Bread	1.43	2.22	81	1.16	1.80	79	1.13	1.75	71	1.02	1.58	82	1.17	1.82	120	1.72	2.66	81	1.16	1.80
Rolls	1.57	5.47	48	.75	2.63	51	.80	2.79	49	.77	2.68	50	.79	2.74	94	1.48	5.14	49	.77	2.68
Pie	1.01	10.88	186	1.88	20.24	191	1.93	20.78	200	2.02	21.76	175	1.77	19.04				189	1.91	20.56
Crullers	1.42	36.15	21	.30	7.59	20	.28	7.23	22	.31	7.95	20	.28	7.23	20	.28	7.23	20	.28	7.23
Force	1.95	1.48	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30
Roast pork	5.26	11.54	49	2.58	5.65	53	2.79	6.12	37	1.95	4.27	41	2.16	4.73	53	2.79	6.12	51	2.68	5.89
Gravy	.38	14.73	18	.07	2.65	18	.07	2.65	34	.13	5.01	38	.14	5.60	33	.13	4.86	31	.12	4.57
Corned beef	4.09	3.72	25	1.02	.93	20	.82	.74	25	1.02	.93	25	1.02	.93	21	.86	.78	25	1.02	.93
Soup	.34	4.05	230	.78	9.32	230	.78	9.32	230	.78	9.32	230	.78	9.32	230	.78	9.32	230	.78	9.32
Butter	.11	86.90	37	.04	32.15	85	.09	73.87	33	.04	28.68	56	.06	48.66	66	.07	57.35	59	.06	51.27
Toast	1.71	3.02				57	.97	1.72	63	1.08	1.90	58	.99	1.75	58	.99	1.75	56	.96	1.69
Buttered milk	.42	5.08				207	.87	10.52	207	.87	10.52	207	.87	10.52	207	.87	10.52	207	.87	10.52
Milk	.57	3.56	150	.86	5.34	100	.57	3.56	200	1.14	7.12	100	.57	3.56	125	.71	4.45	50	.29	1.78
Sugar			35			27			77			69			88			8		
Boiled potato	.42	.05	80	.34	.04	77	.32	.04	98	.41	.05	81	.34	.04	112	.47	.06	86	.36	.04
Fried potato	.46	4.53	114	.52	5.16	78	.36	3.53	86	.40	3.90	91	.42	4.12	95	.44	4.30	106	.49	4.80
Apple sauce	.02	.06	130	.03	.08	110	.02	.07	110	.02	.07	110	.02	.07	110	.02	.07	110	.02	.07
Bananas	.16	.12				106	.17	.13	115	.18	.14	91	.15	.11	104	.17	.12	93	.15	.11
Tea	.002	.004	125	.01	.01				125	.01	.01	125	.01	.01	125	.01	.01	125	.01	.01
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	.05	.04
Total				10.78	93.93		12.36	145.12		12.59	106.23		11.98	120.59		12.18	115.04		12.37	123.61
October 23.																				
Bread	1.43	2.22	78	1.12	1.73	85	1.22	1.89	89	1.27	1.98	82	1.17	1.82	112	1.60	2.49	94	1.34	2.09
Rolls	1.57	5.47	50	.79	2.74	49	.77	2.68	46	.72	2.52	46	.72	2.52	100	1.57	5.47	47	.74	2.57
Biscuit	1.25	16.70	62	.78	10.35	62	.78	10.35	63	.79	10.52	59	.74	9.85	74	.93	12.36	68	.85	11.36
Pie	.38	12.68	137	.52	17.37	150	.57	19.02	151	.57	19.15	125	.48	15.85	140	.53	17.75	149	.57	18.89
Cake	1.46	5.93	43	.63	2.55	42	.61	2.49	36	.53	2.13	45	.66	2.67	42	.61	2.49	39	.57	2.31
Shredded wheat	1.67	1.49	30	.50	.45	32	.53	.48	32	.53	.48	30	.50	.45	31	.52	.46	31	.52	.46
Beefsteak	4.66	9.43	54	2.52	5.09	53	2.47	5.00	50	2.33	4.72	52	2.42	4.90	51	2.38	4.81	57	2.66	5.38
Soup	.17	2.03	135	.23	2.74	135	.23	2.74	135	.23	2.74	135	.23	2.74	135	.23	2.74	135	.23	2.74
Macaroni	.49	4.56	113	.55	5.15	108	.53	4.92				106	.52	4.83	113	.55	5.15	104	.51	4.74

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
October 23—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Cheese	4.17	35.80	23	0.96	8.23	25	1.04	8.95	24	1.00	8.59	21	0.88	7.52	16	0.67	5.73	16	0.67	5.73
Butter	.11	86.90	68	.07	59.09	114	.13	99.07	83	.09	72.13	58	.06	50.40	100	.11	86.90	60	.07	52.14
Eggs	1.87	20.30	58	1.08	11.77	51	.95	10.35	57	1.07	11.57	60	1.12	12.18	60	1.12	12.18	61	1.14	12.38
Milk	.57	3.56	175	1.00	6.23	200	1.14	7.12	150	.86	5.34	100	.57	3.56	125	.71	4.45	50	.29	1.78
Sugar	......	......	59	......	......	41	......	......	69	......	......	58	......	......	82	......	......	10	......	......
Boiled potato	.42	.05	101	.42	.05	89	.37	.04	77	.32	.04	88	.37	.04	84	.35	.04	99	.42	.05
French fried potatoes	.56	5.93	61	.34	3.62	71	.40	4.21	57	.32	3.38	70	.39	4.15	55	.31	3.26	65	.36	3.85
Bananas	.16	.12	......	......	......	124	.20	.15	118	.19	.14	114	.18	.14	......	......	......	101	.16	.12
Tea	.002	.004	125	.01	.01	......	......	......	125	.01	.01	125	.01	.01	125	.01	.01	125	.01	.01
Coffee	.04	.03	125	.05	.04	......	......	......	125	.05	.04	125	.05	.04	......	......	......	125	.05	.04
Total	......	......	......	11.57	137.21	......	11.94	179.46	......	10.88	145.48	......	11.07	123.67	......	12.20	166.29	......	11.16	126.64
October 24.																				
Bread	1.43	2.22	71	1.02	1.58	82	1.17	1.82	86	1.23	1.91	93	1.33	2.06	105	1.50	2.33	93	1.33	2.06
Rolls	1.57	5.47	50	.79	2.74	49	.77	2.68	49	.77	2.68	50	.79	2.74	92	1.44	5.03	44	.69	2.41
Crullers	1.46	40.60	17	.25	6.90	18	.26	7.31	33	.48	13.40	18	.26	7.31	......	......	......	15	.22	6.09
Corn cake	1.03	15.55	102	1.05	15.86	95	.98	14.77	89	.92	13.84	97	1.00	15.08	183	1.88	28.46	170	1.75	26.44
Corn flakes	1.10	.77	20	.22	.15	20	.22	.15	20	.22	.15	20	.22	.15	20	.22	.15	20	.22	.15
Pot roast	6.37	7.44	54	3.44	4.02	50	3.19	3.72	50	3.19	3.72	50	3.19	3.72	53	3.38	3.94	52	3.31	3.87
Gravy	.51	4.47	32	.16	1.43	43	.22	1.92	35	.18	1.56	51	.26	2.28	39	.20	1.74	35	.18	1.56
Soup	.14	3.95	129	.18	5.10	129	.18	5.10	129	.18	5.10	129	.18	5.10	129	.18	5.10	129	.18	5.10
Pudding	.49	3.70	150	.74	5.55	150	.74	5.55	300	1.47	11.10	150	.74	5.55	......	......	......	......	......	......
Baked beans	1.08	2.82	200	2.16	5.64	200	2.16	5.64	200	2.16	5.64	100	1.08	2.82	150	1.62	4.23	150	1.62	4.23
Butter	.11	86.90	62	.07	53.88	132	.15	114.71	70	.08	60.83	79	.09	68.65	84	.09	73.00	56	.06	48.66
Milk	.57	3.56	175	1.00	6.23	150	.86	5.34	150	.86	5.34	100	.57	3.56	125	.71	4.45	50	.29	1.78
Sugar	......	......	32	......	......	28	......	......	74	......	......	75	......	......	70	......	......	8	......	......
Boiled potatoes	.42	.05	110	.46	.06	106	.45	.05	79	.33	.04	87	.37	.04	80	.34	.04	113	.47	.06
Potato chips	.66	24.50	22	.15	5.39	......	......	......	21	.14	5.15	33	.22	8.09	23	.15	5.64	27	.18	6.62
Cauliflower	.33	7.12	104	.34	7.40	114	.38	8.12	98	.32	6.98	108	.36	7.69	101	.33	7.19	107	.35	7.62
Bananas	.16	.12	......	......	......	91	.15	.11	108	.17	.13	109	.17	.13	......	......	......	87	.14	.10
Tea	.002	.004	125	.01	.01	......	......	......	125	.01	.01	125	.01	.01	125	.01	.01	125	.01	.01
Coffee	.04	.03	125	.05	.04	......	......	......	125	.05	.04	125	.05	.04	......	......	......	125	.05	.04
Total	......	......	......	12.09	121.98	......	11.88	176.99	......	12.76	137.62	......	10.89	135.02	......	12.05	141.31	......	11.05	116.80

October 25.																				
Bread	1.43	2.22	57	.82	1.27	43	.61	.95	70	1.00	1.55	42	.60	.93	108	1.54	2.40	88	1.26	1.95
Rolls	1.57	5.47	48	.75	2.63	49	.77	2.68	47	.74	2.57	43	.68	2.35	89	1.40	4.87	42	.66	2.30
Macaroons	1.24	15.38	26	.32	4.00	23	.29	3.54	23	.29	3.54	26	.32	4.00	23	.29	3.54	25	.31	3.85
Toast	1.71	3.02	64	1.09	1.93	48	.82	1.45	37	.63	1.12	56	.96	1.69	60	1.03	1.81	47	.80	1.42
Corn flakes	1.10	.77	20	.22	.15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oatmeal	.41	.36	.....	.....	.....	150	.62	.54	100	.41	.36	150	.62	.54	150	.62	.54	150	.62	.54
Lamb chops	4.01	6.39	68	2.73	4.35	56	2.25	3.58	54	2.17	3.45	72	2.89	4.60	104	4.17	6.65	72	2.89	4.60
Lamb broth	.14	.52	135	.19	.70	135	.19	.70	135	.19	.70	135	.19	.70	135	.19	.70	135	.19	.70
Hash	1.28	1.93	110	1.41	2.12	119	1.52	2.30	115	1.47	2.22	118	1.51	2.28	113	1.45	2.17	107	1.37	2.07
Croquettes	.49	6.64	116	.57	7.70	118	.58	7.84	119	.58	7.90	112	.55	7.44	65	.32	4.32	116	.57	7.70
Ice cream	.47	11.62	100	.47	11.62	93	.44	10.81	82	.39	9.53	99	.47	11.50	88	.41	10.23	101	.47	11.74
Butter	.11	86.90	51	.06	44.32	86	.09	74.73	72	.08	62.57	63	.07	54.75	114	.13	99.07	59	.06	51.27
Milk	.57	3.56	200	1.14	7.12	200	1.14	7.12	200	1.14	7.12	100	.57	3.56	100	.57	3.56	.....	.....	.....
Sugar	.....	.....	68	.....	.....	51	.....	.....	142	.....	.....	97	.....	.....	95	.....	.....	32	.....	.....
Boiled potatoes	.42	.05	70	.29	.04	78	.33	.04	62	.26	.03	82	.34	.04	73	.31	.04	100	.42	.05
Oranges	.12	.10	103	.12	.10	100	.12	.10	100	.12	.10	105	.14	.11	103	.12	.10	105	.12	.11
Grape fruit	.11	.16	107	.12	.17	134	.15	.21	147	.16	.24	152	.17	.24	83	.09	.13	93	.10	.15
Tea	.002	.004	100	.01	.01	.....	.....	.....	225	.01	.01	100	.01	.01	100	.01	.01	100	.01	.01
Coffee	.04	.03	125	.05	.04	.....	.....	.....	125	.05	.04	125	.05	.04	.....	.....	.....	125	.05	.04
Total	.....	.....	.....	10.36	88.27	.....	9.92	116.59	.....	9.69	103.05	.....	10.14	94.78	.....	12.65	140.14	.....	9.90	88.50
October 26.																				
Bread	1.43	2.22	66	.94	1.47	63	.90	1.40	.....	.....	.....	70	1.00	1.55	110	1.57	2.44	88	1.26	1.95
Rolls	1.57	5.47	44	.69	2.41	46	.72	2.52	94	1.48	5.14	47	.74	2.57	87	1.37	4.76	.....	.....	.....
Shortcake	.56	15.54	184	1.03	28.59	193	1.08	29.99	184	1.03	28.59	215	1.20	33.41	159	.89	24.71	200	1.12	31.08
Muffins	1.20	12.10	117	1.40	14.16	130	1.56	15.73	187	2.24	22.63	129	1.55	15.61	125	1.50	15.13	125	1.50	15.13
Force	1.95	1.48	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30	20	.39	.30
Roast beef	4.53	11.19	74	3.35	8.29	75	3.40	8.39	78	3.53	8.73	72	3.26	8.06	75	3.40	8.39	76	3.49	8.62
Soup	.16	.58	111	.18	.64	111	.18	.64	111	.18	.64	111	.18	.64	111	.18	.64	111	.18	.64
Butter	.11	86.90	69	.07	59.96	134	.15	116.45	129	.14	112.10	67	.07	58.22	94	.10	81.69	74	.08	64.31
Milk	.57	3.56	200	1.14	7.12	200	1.14	7.12	200	1.14	7.12	100	.57	3.56	100	.57	3.56	50	.29	1.78
Sugar	.....	.....	65	.....	.....	40	.....	.....	118	.....	.....	75	.....	.....	80	.....	.....	13	.....	.....
Boiled potatoes	.42	.05	117	.49	.06	115	.48	.06	109	.46	.05	110	.46	.06	107	.45	.05	109	.46	.05
French fried potatoes	.40	5.00	72	.29	3.60	79	.32	3.95	58	.23	2.90	80	.32	4.00	63	.25	3.15	69	.28	3.45
Boiled onions	.20	1.32	118	.24	1.56	139	.28	1.83	72	.14	.95	112	.22	1.48	109	.22	1.44	.....	.....	.....
Oranges	.12	.10	91	.11	.09	92	.11	.09	100	.12	.10	102	.12	.10	112	.13	.11	109	.13	.11
Grapes	.04	.10	78	.03	.08	106	.04	.11	71	.03	.07	153	.06	.15	105	.04	.11	59	.02	.06
Tea	.002	.004	100	.01	.01	.....	.....	.....	200	.01	.01	100	.01	.01	100	.01	.01	100	.01	.01
Coffee	.04	.03	100	.04	.03	.....	.....	.....	100	.04	.03	100	.04	.03	.....	.....	.....	100	.04	.03
Total	.....	.....	.....	10.40	128.37	.....	10.75	188.58	.....	11.16	189.36	.....	10.19	129.75	.....	11.07	146.49	.....	9.25	127.52
October 27.																				
Bread	1.43	2.22	69	.99	1.53	87	1.24	1.93	106	1.52	2.35	129	1.84	2.86	98	1.40	2.18	100	1.43	2.22
Rolls	1.57	5.47	47	.74	2.57	45	.71	2.46	94	1.48	5.14	90	1.41	4.92	96	1.51	5.25	46	.72	2.52
Pie	.35	10.60	140	.49	14.84	137	.48	14.52	135	.47	14.31	143	.50	15.16	150	.53	15.90	150	.53	15.90
Biscuits	1.26	21.24	60	.76	12.74	90	1.13	19.12	92	1.16	19.54	72	.91	15.29	80	1.01	16.99	58	.73	12.32

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
October 27—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Shredded wheat	1.67	1.49	34	0.57	0.51	33	0.55	0.49	35	0.58	0.52	34	0.57	0.51	34	0.57	0.51	30	0.50	0.45
Veal cutlet	4.86	7.07	60	2.92	4.24	59	2.87	4.17	58	2.82	4.10	60	2.92	4.24	58	2.82	4.10	60	2.92	4.24
Chipped beef	4.11	2.45	21	.86	.51	25	1.03	.61	22	.90	.54	26	1.07	.64	26	1.07	.64	28	1.15	.69
Soup	.17	2.78	139	.24	3.86	139	.24	3.86	139	.24	3.86	139	.24	3.86	139	.24	3.86	139	.24	3.86
Stewed oysters	.90	2.19	226	2.03	4.95	226	2.03	4.95	226	2.03	4.95	226	2.03	4.95	226	2.03	4.95	226	2.03	4.95
Butter	.11	86.90	62	.07	53.88	109	.12	94.72	105	.12	91.25	78	.08	67.78	83	.09	72.13	39	.04	33.89
Milk	.57	3.56	200	1.14	7.12	200	1.14	7.12	200	1.14	7.12	100	.57	3.56	100	.57	3.56	50	.29	1.78
Sugar			153			39			104			73			83			8		
Boiled potatoes	.42	.05	82	.34	.04	81	.34	.04	90	.38	.05	103	.43	.05	112	.47	.06	97	.41	.05
Hashed potatoes	.30	4.73	100	.30	4.73	102	.31	4.82	82	.25	3.88				108	.32	5.11	100	.30	4.73
Tomatoes	.22	.12				273	.60	.33	141	.31	.17	163	.36	.20	141	.31	.17	115	.25	.14
Grapes	.04	.10	44	.02	.04	91	.04	.09	62	.03	.06	122	.05	.12	64	.03	.06			
Bananas	.16	.16				98	.16	.16	97	.16	.16	90	.14	.14	105	.17	.17	78	.12	.12
Tea	.002	.004	100	.01	.01				100	.01	.01	100	.01	.01	100	.01	.01	100	.01	.01
Coffee	.04	.03	100	.04	.03				100	.04	.03	100	.04	.03				100	.04	.03
Total				11.52	111.60		12.99	159.39		13.64	158.04		13.17	124.32		13.15	135.65		11.71	87.90
October 28.																				
Bread	1.43	2.22	93	1.33	2.06	77	1.10	1.71	22	.31	.49	94	1.34	2.09	131	1.87	2.91	98	1.40	2.18
Rolls	1.57	5.47	44	.67	2.41	46	.72	2.52	87	1.37	4.76	90	1.41	4.92	90	1.41	4.92	86	1.35	4.70
Pie	.95	11.73	150	1.43	17.60	166	1.58	19.47	165	1.57	19.35	140	1.33	16.42	147	1.40	17.24	156	1.48	18.30
Oatmeal	.41	.36	150	.62	.54	150	.62	.54	100	.41	.36	150	.62	.54	150	.62	.54	150	.62	.54
Rice	.22	.10	100	.22	.10	100	.22	.10	100	.22	.10	100	.22	.10				100	.22	.10
Ham	4.19	4.27	20	.84	.85	20	.84	.85	21	.88	.90	21	.88	.90	24	1.01	1.02	23	.96	.98
Hamburg steak	4.71	10.35	60	2.83	6.21	59	2.78	6.11	63	2.97	6.52	63	2.97	6.52	63	2.97	6.52	61	2.87	6.31
Soup	.24	.61	134	.32	.82	134	.32	.82	134	.32	.82	134	.32	.82	134	.32	.82	134	.32	.82
Hominy	.29	7.94	171	.50	13.58	214	.62	16.99	220	.64	17.47	248	.72	19.69	376	1.09	29.85	95	.28	7.54
Molasses			69			86			75			83								
Butter	.11	86.90	88	.09	76.47	103	.11	89.51	77	.08	66.91	56	.06	48.66	100	.11	86.90	50	.06	43.45
Milk	.57	3.56	200	1.14	7.12	200	1.14	7.12	200	1.14	7.12	100	.57	3.56	100	.57	3.56			
Sugar			48			36			107			78			60			11		
Boiled potatoes	.82	.05	82	.34	.04	107	.45	.05	91	.38	.05	90	.38	.05	104	.44	.05	100	.42	.05
French fried potatoes	.48	5.00	71	.34	3.55	77	.37	3.85	70	.34	3.50	72	.35	3.60	61	.29	3.05	60	.29	3.00
Bananas	.16	.16				209	.33	.33	217	.35	.35	177	.28	.28	109	.17	.17	189	.30	.30
Whipped cream	.38	28.47				20	.08	5.69	20	.08	5.69	20	.08	5.69				20	.08	5.69

Tea	.002	.004	100	.01	.01	......	......	......	100	.01	.01	100	.01	.01	100	.01	.01	100	.01	.01
Coffee	.04	.03	100	.04	.03	......	......	......	100	.04	.03	100	.04	.03	......	......	......	100	.04	.03
Total	......	......	......	10.72	131.39	......	11.28	155.66	......	11.11	134.43	......	11.58	113.88	......	12.28	157.56	......	10.70	94.00
October 29.																				
Bread	1.43	......	69	.99	......	93	1.33	......	86	1.23	......	144	2.06	......	100	1.43	......	95	1.36	......
Rolls	1.57	......	48	.75	......	46	.72	......	87	1.37	......	45	.71	......	95	1.49	......	91	1.48	......
Sponge cake	1.35	......	29	.39	......	27	.36	......	30	.41	......	34	.46	......	......	......	......	34	.46	......
Muffins	1.14	......	121	1.38	......	88	1.00	......	100	1.14	......	109	1.24	......	105	1.20	......	104	1.19	......
Cream of wheat	.28	......	150	.42	......	150	.42	......	150	.42	......	150	.42	......	150	.42	......	150	.42	......
Roast pork	5.26	......	61	3.21	......	60	3.16	......	61	3.21	......	59	3.10	......	63	3.31	......	60	3.16	......
Gravy	.30	......	30	.09	......	23	.07	......	25	.08	......	22	.07	......	31	.10	......	20	.06	......
Rice soup	.17	......	213	.36	......	213	.36	......	213	.36	......	213	.36	......	213	.36	......	213	.36	......
Bread pudding	.64	......	140	.90	......	140	.90	......	140	.90	......	140	.90	......	140	.90	......	......	......	......
Butter	.11	......	78	.09	......	126	.11	......	122	.13	......	84	.09	......	92	.10	......	69	.08	......
Scrambled eggs	1.85	......	50	.93	......	50	.93	......	50	.93	......	50	.93	......	50	.93	......	50	.93	......
Milk	.57	......	125	.71	......	50	.29	......	150	.86	......	100	.57	......	100	.57	......	......	......	......
Sugar	......	......	36	......	......	25	......	......	88	......	......	70	......	......	57	......	......	3	......	......
Boiled sweet potatoes	.18	......	131	.21	......	132	.21	......	126	.23	......	120	.22	......	122	.22	......	169	.30	......
Hashed browned potatoes	.43	......	94	.10	......	93	.40	......	87	.37	......	85	.37	......	107	.46	......	74	.32	......
Bananas	.16	......	......	......	......	110	.18	......	91	.15	......	92	.15	......	108	.17	......	......	......	......
Apple sauce	.01	......	150	.06	......	150	.06	......	150	.06	......	150	.06	......	150	.06	......	150	.06	......
Tea	.002	......	......	......	......	......	......	......	125	.01	......	125	.01	......	125	.01	......	......	......	......
Coffee	.04	......	125	.05	......	......	......	......	125	.05	......	125	.05	......	......	......	......	125	.05	......
Total	......	......	......	10.97	......	......	10.56	......	......	11.91	......	......	11.77	......	......	11.73	......	......	10.23	......
October 30.																				
Bread	1.43	......	91	1.30	......	77	1.10	......	98	1.40	......	106	1.52	......	148	2.12	......	96	1.37	......
Rolls	1.57	......	50	.79	......	48	.75	......	83	1.30	......	47	.74	......	88	1.38	......	92	1.44	......
Apple pie	.40	......	151	.60	......	150	.60	......	151	.60	......	145	.58	......	160	.64	......	165	.66	......
Gold cake	.89	......	47	.42	......	41	.36	......	36	.32	......	30	.27	......	......	......	......	37	.33	......
Toast	1.71	......	61	1.04	......	48	.82	......	57	.97	......	53	.91	......	51	.87	......	47	.80	......
Shredded wheat	1.67	......	......	......	......	30	.50	......	36	.60	......	68	1.14	......	34	.57	......	......	......	......
Steak	4.99	......	60	2.99	......	60	2.99	......	60	2.99	......	61	3.04	......	59	2.94	......	60	2.99	......
Hamburg steak	4.04	......	50	2.02	......	50	2.02	......	50	2.02	......	50	2.02	......	50	2.02	......	50	2.02	......
Potato soup	.27	......	230	.62	......	230	.62	......	230	.62	......	230	.62	......	230	.62	......	230	.62	......
Macaroni	.49	......	75	.37	......	95	.47	......	......	......	......	107	.52	......	93	.46	......	103	.50	......
Butter	.11	......	54	.06	......	77	.08	......	87	.10	......	56	.06	......	102	.11	......	47	.05	......
Milk	.57	......	......	......	......	100	.57	......	200	1.14	......	150	.86	......	50	.29	......	50	.29	......
Sugar	......	......	50	......	......	58	......	......	118	......	......	88	......	......	71	......	......	8	......	......
Boiled potatoes	.42	......	82	.34	......	90	.38	......	136	.57	......	71	.30	......	93	.39	......	95	.40	......
French fried potatoes	.48	......	70	.34	......	68	.33	......	60	.29	......	129	.62	......	66	.32	......	50	.24	......
Tomatoes	.22	......	135	.30	......	198	.44	......	145	.32	......	146	.32	......	193	.42	......	140	.31	......
Bananas	.16	......	......	......	......	150	.24	......	125	.20	......	118	.19	......	151	.24	......	100	.16	......
Tea	.002	......	125	.01	......	......	......	......	125	.01	......	125	.01	......	50	.01	......	......	......	......
Coffee	.04	......	125	.05	......	......	......	......	125	.05	......	125	.05	......	......	......	......	125	.05	......
Total	......	......	......	11.25	......	......	12.27	......	......	13.50	......	......	13.77	......	......	13.40	......	......	12.23	......

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G. Amount of food.	H. H. G. Nitrogen.	H. H. G. Ether extract.	W. W. H. Amount of food.	W. W. H. Nitrogen.	W. W. H. Ether extract.	L. M. L. Amount of food.	L. M. L. Nitrogen.	L. M. L. Ether extract.	J. F. L. Amount of food.	J. F. L. Nitrogen.	J. F. L. Ether extract.	E. C. M. Amount of food.	E. C. M. Nitrogen.	E. C. M. Ether extract.	W. C. R. Amount of food.	W. C. R. Nitrogen.	W. C. R. Ether extract.
October 31.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Bread	1.43		100	1.43		84	1.20		100	1.43		103	1.47		108	1.54		100	1.43	
Rolls	1.57		50	.79		46	.72		91	1.43		99	1.55		96	1.51		95	1.49	
Corn bread	1.04		80	.83		101	1.08		110	1.14		97	1.01		126	1.31		139	1.45	
Oatmeal	.41		150	.62		150	.62		150	.62		150	.62		150	.62		150	.62	
Apple bread pudding	.24		150	.36		150	.36		150	.36		150	.36					150	.36	
Pot roast	6.05		55	3.33		55	3.33		55	3.33		55	3.33		55	3.33		55	3.33	
Gravy	.28		44	.12		40	.11		35	.10		43	.12		60	.17		50	.14	
Vegetable soup	.34		235	.80		235	.80		235	.80		235	.80		235	.80		235	.80	
Baked beans	1.11		200	2.22		200	2.22		200	2.22		200	2.22		200	2.22		200	2.22	
Butter	.11		38	.04		80	.09		68	.07		62	.07		77	.08		49	.05	
Milk	.57		200	1.14		150	.86		200	1.14		100	.57		100	.57				
Sugar			38			8			140			83			64			25		
Boiled potatoes	.42		92	.39		110	.46		90	.38		100	.42		132	.55		108	.45	
Potato chips	.90		19	.17		23	.21		23	.21		27	.24		27	.24		32	.29	
Spinach	.41					90	.37		180	.74		90	.37		90	.37		90	.37	
Bananas	.16					124	.20		141	.23		138	.22							
Grape fruit	.11		123	.14		122	.13		110	.12		108	.12		100	.11		72	.08	
Tea	.002		125	.01					125	.01		125	.01		125	.01				
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				12.44			12.76			14.38			13.55			13.43			13.13	
November 1.																				
Bread	1.43		92	1.32		89	1.27		103	1.47		127	1.82		98	1.40		95	1.36	
Rolls	1.57		42	.66		42	.66		85	1.33		90	1.41		88	1.38		88	1.38	
Cookies	.86		26	.22		27	.23		25	.22		25	.22		21	.18		15	.13	
Toast	1.71		42	.72		36	.62		40	.68		52	.89		47	.80		55	.94	
Force	1.95		20	.39		20	.39		20	.39		20	.39		20	.39		20	.39	
Fritters	1.11		56	.62		59	.65		60	.67		60	.67					64	.71	
Sirup			40			89			95			50								
Steak	5.12		60	3.07		61	3.12		61	3.12		60	3.07		61	3.12		60	3.07	
Potato soup	.27		215	.58		215	.58		215	.58		215	.58		215	.58		215	.58	
Cream	.51		62	.32		88	.45		81	.41		88	.45		102	.52		100	.51	
Butter	.11		56	.06		74	.08		67	.07		62	.07		74	.08		61	.07	
Scrambled eggs	1.86		50	.93		50	.93		50	.93		50	.93		50	.93		50	.93	

Milk	.57		150	.86		150	.86		200	1.14		100	.57		150	.86		50	.29	
Sugar			38			34			78			71			70			8		
Baked sweet potatoes	.18		195	.35		146	.26		132	.24		140	.25		156	.28		256	.46	
Hashed potatoes	.34		95	.32		95	.32		93	.32		94	.32		95	.32		81	.28	
Bananas	.16					156	.25		155	.25		152	.24		157	.25		70	.11	
Ice cream	.27		147	.40		130	.35		118	.32		132	.36		143	.39		137	.37	
Tea	.002		125	.01					125	.01		125	.01		125	.01				
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				10.88			11.02			12.20			12.30			11.49			11.63	
November 2.																				
Bread	1.43		59	.84		60	.86		102	1.46		104	1.49		133	1.90		80	1.14	
Rolls	1.57		45	.71		44	.69		90	1.41		92	1.44		94	1.48				
Cocoanut cake	.77											89	.69		75	.58				
Muffins	1.29		148	1.91		146	1.88		200	2.58		131	1.69		143	1.84		139	1.79	
Shredded wheat	1.67		33	.55		32	.53					33	.55		30	.50		32	.53	
Rice	.21		115	.24		115	.24		115	.24		115	.24					115	.24	
Roast beef	4.31		52	2.24		63	2.67		59	2.54		55	2.37		55	2.37		54	2.33	
Vegetable soup	.14		225	.32		225	.32		225	.32		225	.32		225	.32		225	.32	
Beef hash	1.57		110	1.73		116	1.82		119	1.87		124	1.95		112	1.76		123	1.93	
Cottage pudding	1.09		93	1.01		95	1.04		168	1.83		80	.87					75	.82	
Sauce	.04		56	.02		67	.03		98	.04		48	.02					62	.03	
Butter	.11		70	.08		111	.12		86	.09		81	.09		101	.11		44	.05	
Milk	.57		150	.86		150	.86		150	.86		100	.57		100	.57		50	.29	
Sugar			38			35			62			71			55					
Boiled potatoes	.42		101	.42		108	.45		81	.34		120	.50		97	.41		66	.28	
Grapes	.12		99	.12		107	.13		119	.14		118	.14		108	.13		115	.14	
Tea	.002		125	.01					125	.01		125	.01		125	.01				
Coffee	.04		125	.05					125	.05		125	.05					125	.05	
Total				11.11			11.64			13.78			12.99			11.98			9.91	
November 3.																				
Bread	1.43	6.39	93	1.33	5.94	60	.86	3.89	87	1.24	5.56	122	1.74	7.80	143	2.04	9.14	90	1.29	5.75
Rolls	1.57	5.48	48	.75	2.63				88	1.38	4.82	89	1.40	4.88	92	1.44	5.04	67	1.05	3.67
Apple pie	.36	11.53	158	.57	18.22							149	.54	17.18	131	.47	15.10	147	.53	16.95
Cocoanut cake	.77	12.82	55	.42	7.05				122	.94	15.61	47	.36	6.03						
Hominy	.36	7.95	187	.67	14.87	222	.80	17.65	172	.62	13.67	232	.84	18.44	310	1.22	27.03			
Sirup			50			70			50			58								
Oatmeal	.41	.54	200	.82	1.08	150	.62	.81				150	.62	.81	150	.62	.81	200	.82	1.08
Veal cutlet	4.52	9.48	53	2.40	5.02	67	3.03	6.35	50	2.26	4.74	57	2.58	5.40	50	2.26	4.74	55	2.49	5.21
Roast beef	4.31	7.07	41	1.77	2.90	47	2.03	3.32	39	1.68	2.76	45	1.91	3.18	47	2.03	3.32	30	1.29	2.12
Tomato soup	.15	.64	232	.35	1.48	232	.35	1.48	232	.35	1.48	232	.35	1.48	232	.35	1.48	232	.35	1.48
Butter	.11	79.18	38	.04	30.09	30	.03	23.75	50	.06	39.59	65	.07	51.47	105	.12	83.14	51	.06	40.38
Milk	.57	3.60	150	.86	5.40	100	.57	3.60	100	.57	3.60	100	.57	3.60	100	.57	3.60			
Sugar			34			29			49			57			26			10		
Baked sweet potatoes	.18	5.61	205	.37	11.50	107	.19	6.00	103	.19	5.78	107	.19	6.00	214	.39	12.01	142	.26	7.97
French fried potatoes	.44	6.20	64	.28	3.97	88	.39	5.46	81	.36	5.02	75	.33	4.65	74	.33	4.59	80	.35	4.96
Spinach	.41	3.49				160	.66	5.58	106	.43	3.70	97	.40	3.39	102	.42	3.56	104	.43	3.64

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
November 3—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Apples	0.02	0.17	120	0.02	0.20	80	0.02	0.14	143	0.08	0.24	128	0.03	0.22	120	0.02	0.20			
Tea	.002	.004	125	.01	.01				125	.01	.01	125	.01	.01						
Coffee	.04	.03	125	.05	.04				125	.05	.04	125	.05	.04				125	0.05	0.04
Total				10.71	110.40		9.55	78.03		10.17	106.65		12.02	134.58		12.28	173.76		8.97	93.25
November 4.																				
Bread	1.43	6.39	92	1.32	5.88	55	.79	3.51	92	1.32	5.88	110	1.57	7.03	125	1.79	7.99	70	1.00	4.47
Rolls	1.57	5.48	46	.72	2.52	44	.69	2.50	90	1.41	4.93	87	1.37	4.77	85	1.33	4.66	48	.75	2.63
Lemon pie	.55	8.98	180	.99	16.16	200	1.10	17.96	225	1.24	20.21	200	1.10	17.96	185	1.02	16.61	185	1.02	16.61
Chocolate cake	.86	8.07	49	.42	3.95	46	.40	3.71	39	.34	3.15									
Toast	1.71	4.01	58	.99	2.33	55	.94	2.21	55	.94	2.21	41	.70	1.64	52	.89	2.09	46	.79	1.84
Cream of wheat	.28	.07	150	.42	.11	150	.42	.11				150	.42	.11	150	.42	.11	150	.42	.11
Smoked beef	4.72	2.45	22	1.04	.54				13	.61	.32	17	.80	.42	18	.85	.44	15	.71	.37
Hamburg steak	4.80	7.65	68	3.26	5.20	72	3.46	5.51	68	3.26	5.20	68	3.26	5.20	68	3.26	5.20	71	3.41	5.43
Potato soup	.23	1.93	213	.49	4.11	213	.49	4.11	213	.49	4.11	213	.49	4.11	213	.49	4.11	213	.49	4.11
Escalloped oysters	1.27	7.85	78	.99	6.12	120	1.52	9.42	127	1.61	9.97	131	1.66	10.28	127	1.61	9.97	128	1.63	10.05
Spaghetti	.49	3.91	100	.49	3.91	105	.51	4.11	108	.53	4.22	83	.41	3.25	118	.58	4.61	85	.42	3.32
Butter	.11	79.18	46	.05	36.42	89	.10	70.47	63	.07	49.88	75	.08	59.39	84	.09	66.51	42	.05	33.26
Milk	.57	3.60	200	1.14	7.20	100	.57	3.60	50	.29	1.80	100	.57	3.60	100	.57	3.60			
Sugar			34			19			49			51			49			4		
Boiled potatoes	.42	.05	117	.49	.06	98	.41	.05	74	.31	.04	146	.61	.07	87	.37	.04	104	.44	.05
Hashed brown potatoes	.43	5.97	97	.42	5.79	104	.45	6.21	104	.45	6.21	92	.40	5.49	95	.41	5.67	93	.40	5.55
Grapes	.04	.10	108	.04	.11	112	.04	.11	104	.04	.10	106	.04	.11	105	.04	.11	118	.05	.12
Tea	.002	.004	125	.01	.01				125	.01	.01	125	.01	.01	125	.01	.01			
Coffee	.04	.03	125	.05	.04							125	.05	.04				125	.05	.04
Total				13.33	100.46		11.89	133.59		12.92	118.24		13.54	123.48		13.73	131.73		11.63	87.96
November 5.																				
Bread	1.43	6.39	53	.76	3.39	75	1.07	4.79	87	1.24	5.56	112	1.60	7.16	127	1.82	8.18	84	1.20	5.37
Rolls	1.57	5.48	48	.75	2.63				89	1.40	4.88	84	1.32	4.60	94	1.48	5.15	77	1.21	4.22
Apple pie	.32	9.91	168	.54	16.65	150	.48	14.87	158	.51	15.66	158	.51	15.66	155	.50	15.36	148	.47	14.67

Ginger cookies	.89	9.18	.....	.....	.....	.....	.....	.....	.....	.....	.....	43	.38	3.95	35	.31	3.21	35	.31	3.21
Muffins	1.23	12.76	137	1.69	17.48	117	1.44	14.93	183	2.25	23.35	120	1.48	15.31	125	1.54	15.95	116	1.43	14.80
Shredded wheat	1.67	1.49	31	.52	.46	30	.50	.45	30	.50	.45	30	.50	.45	27	.45	.40	.....	.....	.....
Rice	.21	.33	100	.21	.33	100	.21	.33	100	.21	.33	100	.21	.33	100	.21	.33	100	.21	.33
Roast lamb	5.52	11.50	57	3.15	6.56	52	2.87	5.98	53	2.93	6.10	52	2.87	5.98	56	3.09	6.44	55	3.04	6.33
Gravy	.35	15.04	36	.13	5.41	37	.13	5.56	50	.18	7.52	30	.11	4.51	30	.11	4.51	31	.11	4.67
Ham	4.90	9.65	20	.98	1.93	16	.78	1.54	19	.93	1.83	18	.88	1.74	18	.88	1.74	20	.98	1.93
Vegetable soup	.21	3.53	237	.50	8.37	237	.50	8.37	237	.50	8.37	237	.50	8.37	237	.50	8.37	237	.50	8.37
Cheese	3.67	27.67	30	1.10	8.30	.....	.....	.....	33	1.21	9.13	35	1.28	9.68	.....	.....	.....	30	1.10	8.30
Butter	.11	79.18	56	.06	44.34	80	.09	63.34	95	.10	75.22	76	.08	60.18	82	.09	64.93	47	.05	37.21
Milk	.57	3.60	150	.86	5.40	150	.86	5.40	200	1.14	7.20	100	.57	3.60	100	.57	3.60	.....	.....	.....
Sugar	.....	.....	44	.....	.....	48	.....	.....	87	.....	.....	56	.....	.....	98	.....	.....	6	.....	.....
Boiled potatoes	.42	.05	95	.40	.05	135	.57	.07	119	.50	.06	104	.44	.05	124	.52	.06	119	.50	.06
French fried potatoes	.49	6.87	61	.30	4.19	67	.33	4.60	58	.28	3.98	52	.25	3.57	62	.30	4.26	70	.34	4.81
Bananas	.16	.12	.....	.....	.....	120	.19	.14	113	.18	.14	117	.19	.14	92	.15	.11	116	.19	.14
Tea	.002	.004	125	.01	.01	.....	.....	.....	125	.01	.01	125	.01	.01	250	.01	.01	.....	.....	.....
Coffee	.04	.03	125	.05	.04	.....	.....	.....	125	.05	.04	125	.05	.04	.....	.....	.....	.....	.....	.....
Total	.....	.....	.....	12.01	125.54	.....	10.02	130.37	.....	14.12	169.83	.....	13.23	145.23	.....	12.53	142.61	.....	11.64	114.42
November 6.																				
Bread	1.43	6.39	46	.66	2.94	71	1.02	4.54	85	1.22	5.43	148	2.12	9.46	130	1.86	8.31	106	1.52	6.77
Rolls	1.57	5.48	96	1.51	5.26	46	.72	2.52	92	1.44	5.04	90	1.41	4.93	111	1.74	6.08	48	.75	2.63
Toast	1.71	4.01	63	1.08	2.53	50	.86	2.01	176	3.01	7.06	56	.96	2.25	111	1.90	4.45	61	1.04	2.45
Force	1.95	1.48	25	.49	.37	25	.49	.37	25	.49	.37	25	.49	.37	25	.49	.37	25	.49	.37
Bread pudding	.70	3.69	122	.85	4.50	120	.84	4.43	119	.83	4.39	123	.86	4.54	.....	.....	.....	.....	.....	.....
Minced lamb	3.72	15.11	52	1.93	7.86	52	1.93	7.86	54	2.01	8.16	53	1.97	8.01	51	1.90	7.71	53	1.97	8.01
Roast pork	5.91	14.60	62	3.66	9.05	62	3.66	9.05	65	3.84	9.49	65	3.84	9.49	61	3.61	8.91	65	3.84	9.49
Gravy	.35	6.70	38	.13	2.55	33	.12	2.21	35	.13	2.35	33	.12	2.21	45	.16	3.02	35	.13	2.35
Tomato soup	.23	.33	225	.52	.74	225	.52	.74	225	.52	.74	225	.52	.74	225	.52	.74	225	.52	.74
Butter	.11	79.18	53	.06	41.97	88	.10	69.68	95	.10	75.22	82	.09	64.93	98	.11	77.60	48	.05	38.01
Milk	.57	3.60	150	.86	5.40	100	.57	3.60	200	1.14	7.20	100	.57	3.60	100	.57	3.60	50	.29	1.80
Sugar	.....	.....	48	.....	.....	28	.....	.....	74	.....	.....	67	.....	.....	58	.....	.....	.....	.....	.....
Boiled potatoes	.42	.05	82	.34	.04	103	.43	.05	82	.34	.04	84	.35	.04	86	.36	.04	97	.41	.05
Hashed brown potatoes	.30	4.69	131	.39	6.14	128	.38	6.00	105	.32	4.92	122	.37	5.72	105	.32	4.92	117	.35	5.49
Bananas	.16	.12	.....	.....	.....	97	.16	.12	99	.16	.12	93	.15	.11	99	.16	.12	.....	.....	.....
Grapes	.04	.10	78	.03	.08	92	.04	.09	79	.03	.08	144	.06	.14	50	.02	.05	.....	.....	.....
Apple sauce	.04	.06	247	.10	.15	247	.10	.15	247	.10	.15	247	.10	.15	247	.10	.15	247	.10	.15
Tea	.002	.004	125	.01	.01	.....	.....	.....	125	.01	.01	125	.01	.01	125	.01	.01	.....	.....	.....
Coffee	.04	.03	125	.05	.04	.....	.....	.....	125	.05	.04	125	.05	.04	.....	.....	.....	125	.05	.04
Total	.....	.....	.....	12.67	89.63	.....	11.94	113.42	.....	15.74	130.81	.....	14.04	116.74	.....	13.83	126.08	.....	11.51	78.35
November 7.																				
Bread	1.43	6.39	77	1.10	4.92	87	1.24	5.56	98	1.40	6.26	145	2.07	9.27	145	2.07	9.27	97	1.39	6.20
Rolls	1.57	5.48	95	1.49	5.21	44	.69	2.41	88	1.38	4.82	95	1.49	5.21	95	1.49	5.21	48	.75	2.63
Corn bread	1.11	16.83	91	1.01	15.32	108	1.20	18.18	126	1.40	21.21	112	1.24	18.85	130	1.44	21.88	124	1.38	20.87
Oatmeal	.41	.54	150	.62	.81	150	.62	.81	150	.62	.81	150	.62	.81	150	.62	.81	150	.62	.81
Apple pudding	.24	6.15	120	.29	7.38	120	.29	7.38	120	.29	7.38	.....	.....	.....	120	.29	7.38	120	.29	7.38

Daily food chart—Continued.

Date and kind of food.	Nitrogen.	Ether extract.	H. H. G.			W. W. H.			L. M. L.			J. F. L.			E. C. M.			W. C. R.		
			Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.	Amount of food.	Nitrogen.	Ether extract.
November 7—Cont'd.	*Per ct.*	*Per ct.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
Pot roast	6.06	7.83	52	3.15	4.07	50	3.03	3.92	50	3.03	3.92	50	3.03	3.92	55	3.33	4.31	51	3.09	3.99
Gravy	.30	9.95	43	.13	4.28	47	.14	4.68	42	.13	4.18	45	.14	4.48	43	.13	4.28	41	.12	4.08
Macaroni soup	.33	1.88	220	.73	4.14	220	.73	4.14	220	.73	4.14	220	.73	4.14	220	.73	4.14	220	.73	4.14
Baked beans	1.10	3.41	200	2.20	6.82	200	2.20	6.82	200	2.20	6.82	200	2.20	6.82	200	2.20	6.82	200	2.20	6.82
Butter	.11	79.18	77	.08	60.97	115	.13	91.06	71	.08	56.22	79	.09	62.55	87	.10	68.89	54	.06	42.76
Milk	.57	3.60	150	.86	5.40	150	.86	5.40	200	1.14	7.20	100	.57	3.60	100	.57	3.60	......	......	......
Sugar	......	......	44	......	......	40	......	......	129	......	......	64	......	......	64	......	......	19	......	......
Boiled potatoes	.42	.05	97	.41	.05	119	.50	.06	108	.45	.05	115	.48	.06	127	.53	.06	138	.58	.07
Baked sweet potatoes	.18	5.61	190	.34	10.66	105	.19	5.89	......	......	......	142	.26	7.97	128	.23	6.98	107	.19	6.00
Spinach	.41	3.49	55	.23	1.92	102	.42	3.56	105	.42	3.66	102	.42	3.56	111	.46	3.87	102	.42	3.56
Bananas	.16	.12	......	......	......	86	.14	.10	75	.12	.08	86	.14	.10	72	.12	.09	......	......	......
Grape fruit	.11	.16	92	.10	.15	108	.12	.17	134	.15	.21	79	.09	.13	70	.08	.11	80	.09	.13
Tea	.002	.004	......	......	......	......	......	......	125	.01	.01	125	.01	.01	125	.01	.01	......	......	......
Coffee	.04	.03	125	.05	.04	......	......	......	125	.05	.04	125	.05	.04	......	......	......	125	.05	.04
Total	......	......	......	12.79	132.14	......	12.50	160.14	......	13.60	127.01	......	13.63	131.52	......	14.40	147.71	......	11.96	109.48

INVESTIGATIONS ON THE EFFECTS OF SODIUM BENZOATE ON THE HEALTH AND GENERAL METABOLISM OF MAN.

By JOHN H. LONG.

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INTRODUCTION.

I have attempted the solution of the problem presented to me through a series of laboratory and clinical observations carried out on six men consuming a controlled diet. The laboratory observations were mainly chemical and bacteriological, and were intended to disclose any change in the general metabolism, or character of the excretion of the men under study. The clinical observations were of the usual routine nature, but were noted with more than the ordinary care. I consider these observations as having, for the present inquiry, and under the conditions which obtain, no less value than the other set, and hence I am presenting them in all detail, as made from day to day. The somewhat monotonous bacteriological examination of the feces is given in the same detail, since the object of the report is to present all the observed facts which may have any bearing on the questions of the diet, general health and character of the metabolism and excretions of the subjects of the experiments.

The squad under observation in my laboratories consisted of six men who were all students of medicine, but who, during the progress of the tests, had other employment. At the beginning of the experiments the men were in normal health, but not in unusually good physical condition, since the work was begun at the end of the school year, following rather heavy courses of study.

For general convenience the men were furnished with rooms in the same house, and the meals were prepared and served in a large vacated room in the college building adjoining the laboratory in which most of the analyses were made. The kitchen was screened off from one end of this room, and the meals were prepared by a professional cook who had had previous experience with metabolism work. This simplified many of our natural difficulties very greatly, and made it possible to maintain an accurate control over the daily dietaries in such a way as to permit a fairly close calculation of the caloric value of the food as weighed out and served.

Dr. S. R. Benedict, now professor of physiological chemistry in Syracuse University, had general charge of the dietaries and the chemical work connected with the investigation. The bacteriological work necessary and the medical oversight of the men were in the hands of Dr. W. H. Buhlig, professor of clinical pathology in Northwestern University. These gentlemen were in constant attendance at the laboratories, and the success of the investigations must be credited largely to their careful control of all conditions involved. Since the conclusion of the actual tests Mr. Frank Gephart, who took part in the analytical work, has rendered valuable aid in the numerous necessary calculations and the tabulation of results.

At the beginning of the observations the men on the squad were subjected to careful examination, and the facts given below with regard to previous medical history and condition were secured.

Previous medical history.

	Name and number.					
	H. N. B., No. I.	W. W. C., No. II.	A. G., No. III.	O. F. L., No. IV.	A. M. N., No. V.	C. H. S., No. VI.
Date	July 3	July 2	June 30	July 6	July 1	July 6.
Age	26 years	20 years	25 years	28 years	27 years	23 years.
Family history	Father died of pulmonary tuberculosis. Otherwise good.	One brother died of what was diagnosed as tuberculosis of peritoneum. Otherwise good.	One brother died at 16 months of tubercular meningitis. Otherwise good.	Very good	Very good	Very good.
Social condition	Single	Single	Married	Single	Single	Single.
Personal previous history	Has had what seemed to be attacks of appendicitis. No operation. Otherwise good.	Scarlet fever and measles when child. Gonorrhea a year ago. Otherwise negative.	Pneumonia at 6 and 12 years of age. Inguinal hernia cured by truss. Colitis last summer, with mucus and blood in stools.	Diseases of childhood only. Mumps and measles.	Pneumonia when child. Typhoid 2 years ago. Gastro-intestinal disease last winter. Otherwise negative.	Typhoid(?) 3 years ago. Sick 3 weeks. Otherwise negative.
Present occupation	Medical student. Anatomical laboratory assistant.	Medical student. Janitor in chemical laboratory.	Medical student. Laboratory worker. Chemist.	Medical student. Laboratory helper.	Medical student. Laboratory worker. Chemist.	Medical student; newsboy.
Previous occupation	Bank clerk. Stenographer.	Farmer	Farmer. School teacher.	Athletic director	Teacher	School-teacher.
Habits	Smokes moderately. Very good.	Little alcohol. Smokes moderately.	Smokes considerably. Alcohol moderately.	Excellent	Excellent	Very good. Smokes moderately.
Tendency to headaches	No	No	No	No	No	When constipated.
Tendency to nervous disorders.	No	No	Of nervous temperament.	No	No	No.
Tendency to eruptions	No	Acne only	No	No	No	No.
Tendency to coughs	No	No	No	No	No	No.
Tendency to expectoration	No	No	No. Mucus in morning	No	No	No.
Tendency to sore throat	No	No	In past from smoking	No	No	No.
Tendency to palpitation	Yes	No	No	No	No	No.
Tendency to difficult breathing.	No	No	No	No	No	No.
Tendency to dyspepsia	No	No	No. Has lost appetite from smoking.	No	No	No.
Tendency to irregular urinations.	No	No	No	No	No	No.
Tendency to diarrhea	No	No	No. Loose movements	No	No	No.
Tendency to constipation	No	No	No	Slight	No	Once in a while.
Weight	65.9 kilos	68.9 kilos	72.9 kilos	66.9 kilos	73.4 kilos	82.1 kilos.
Height	5 feet 7¾ inches	5 feet 5½ inches	5 feet 8¾ inches	5 feet 7⅜ inches	5 feet 10⅜ inches	6 feet.
Measurement, chest, repose	32½ inches	36½ inches	36 inches	35½ inches	38 inches	35½ inches.
Chest, full inspiration	33½ inches	38 inches	38½ inches	37 inches	40 inches	37½ inches.
Chest, full expiration	31 inches	36 inches	35 inches	34 inches	36½ inches	34½ inches.

Previous medical history—Continued.

	Name and number.					
	H. N. B., No. I.	W. W. C., No. II.	A. G., No. III.	O. F. L., No. IV.	A. M. N., No. V.	C. H. S., No. VI.
Girth, abdomen	31 inches	32 inches	34 inches	32 inches	$34\frac{1}{2}$ inches	33 inches.
Figure	Good	Good	Good	Good	Good	Good.
Remarks	Hypermetropia and astigmatism corrected by glasses. Hearing not impaired.	Vision and hearing good.	Has small external hemorrhoid. Error of vision corrected by glasses. Hearing normal.	Has very low respiratory rate. Says it is due to previous training. Astigmatism fully corrected. Hearing not impaired.	Vision and hearing good.	Vision and hearing good.

Duration of tests.—The first meals were served to the squad on June 29, and the last on October 30. The interval was divided into sixteen periods, the average length of which was about seven days, as the tables below will show. The actual administration of benzoate began on July 24, following three preparatory fore periods in which the diet habits of the men were closely studied.

Diet.—In this time and throughout the whole test the men were allowed a very ample diet, following their own tastes and desires as far as possible. The food was well prepared, and as served would be considered a good example of home cooking; the only modifications made were such as were rendered necessary to facilitate accurate sampling and analysis. Meats, for example, were always served in the minced condition, since uniform samples for analysis could not be secured in any other way. Gravy was served separately and was mixed in by the men at the table. Care was taken to serve the minced meat hot and in such manner as to relieve the monotony of the diet as far as possible. Jellies, custards, puddings, cakes, and other articles were always made in such a manner as to facilitate the subsequent work of the analysts. The location of the kitchen with respect to the laboratories and the office of the director added greatly in simplifying proper control here.

Dosage.—From July 24 to September 21, sixty days, each man received a dose of 300 milligrams daily of Merck's sodium benzoate, calculated as anhydrous, divided into three portions of 100 milligrams each. That is, the benzoate was given at each meal, and was measured out from an accurately prepared solution into some article of food which the men ate with a relish. At no time during the test did the men have any idea of the part of the food which contained the benzoate, nor did they know when the administration began or ended. No especial curiosity on the subject was manifest and the men did not act as if the food was in any way a deviation from the normal.

On September 22, after the completion of eight preservative periods, the dose of benzoate was increased to 600 milligrams daily, divided through the three meals. This dosage was continued through two periods of seven days each. Between the higher and lower preservative periods the feces of the men were marked off by the usual method of lampblack administration in capsules, which was the case following the next period, also.

On October 6, the fourteenth period, or the eleventh preservative period, began. On this date the dose was increased to 1 gram of benzoate daily, which was continued through eighteen days, that is, from October 6 to 23, inclusive. It was found easily possible to distribute this amount of benzoate through the three meals without

in any way attracting the attention of the men consuming the food. The eighteen days were divided into two periods.

The total amounts of benzoate administered were, then, as follows:

Periods.	Duration.	Daily dose.	Total.
	Days.	*Gram.*	*Grams.*
Fourth to eleventh, inclusive	60	0.300	18.0
Twelfth to thirteenth, inclusive	14	.600	8.4
Fourteenth to fifteenth, inclusive	18	1.000	18.0
Total			44.4

The men were kept under routine observation through an after period, No. 16, of seven days, and have been under general observation up to the time of the completion of this report, January 10, 1909. Following the official conclusion of the tests on October 31 two of the men on the squad, A. M. N. and C. H. S., continued the same general diet with a greatly increased dose of the benzoate. This was carried to 10 grams daily. In this they were joined by Mr. Frank Gephart, who had assisted in the weighing of the foods throughout the whole time, had worked in the laboratory, consumed the regular diet with the squad, and had lived under the same general conditions. On November 1 he began with relatively large doses. The effects of these large doses on the men will be referred to below.

Methods of analysis.—It is not necessary to go into details here; most of the results for the urine were obtained by aid of the well-known processes of Folin. For total sulphur, however, a method was worked out by Doctor Benedict which, when applied, gave very satisfactory results. This consisted, essentially, in oxidation of the urine through boiling down with copper nitrate and potassium chlorate, and subsequent fusion, as preliminary to precipitation.

In the determination of urea nitrogen a marked improvement and economy of time was effected by heating the urine in an autoclave with dilute hydrochloric acid. The process has been described by Benedict and Gephart in the November, 1908, number of the Journal of the American Chemical Society.

Collection of the urine and feces.—The urine and feces were collected in 24-hour periods, and of the urine daily analyses were made, excepting of the Saturday collection, which came into the laboratory Sunday morning. This was saved and mixed with the sample from Sunday; an analysis of the composite was then made. The urine was collected in bottles containing always a little toluene, and as a further precaution the bottles were kept in a large ice box in the intervals. When brought to the laboratory in the morning the reaction and specific gravity were taken, after which each urine

was diluted to a constant volume, 2,000 c. c., and aliquots taken for the several tests. This dilution to a standard volume greatly facilitates subsequent calculations.

The feces were collected and weighed for each twenty-four hours. Aliqout portions were weighed out, after thorough mixing, and put in a separate container for analysis at the end of the period, which was generally seven days, as explained above. The bacterial tests, however, were made on the fresh samples.

For the separate collection of urine and feces a very convenient form of closet was employed which was suggested to me by Professors Grindley and Hawk, of the University of Illinois. One of these closets was kept at the laboratory and one at the rooming house.

Exercise—hours for meals.—The quarters rented for the men were in a comfortable house, about half a mile from the laboratory and diet kitchen. The six men occupied three rooms, the division being made according to the wishes of the men themselves. In addition to the walk between the two places the men had plenty of other exercise. Two of them carried papers early in the morning and had other work throughout the day. Three gave help in the analytical laboratory, and two, in addition to other work, had some janitor duties about the college. All were encouraged to play handball for a short time after dinner each day, and this exercise was generally taken.

Breakfast was served at 7:30, lunch at 12, and dinner at 6. The men were put upon their honor as far as general conduct and consumption of other foods was concerned, and it is confidently believed that there were no violations of the advice of the director here. There was no restriction on the consumption of water. The summer was unusually warm and any attempt to limit the amount of water drunk, or even to control it, would have worked a hardship. In every respect the men were supposed to lead lives as nearly normal as possible, and only such restrictions were made as were really necessary for the proper prosecution of the work.

With this brief introduction, which is doubtless sufficiently full for the purpose, we pass to the consideration of the data secured in the various examinations made. The general urine tests will be taken up first.

URINE AND FECES CHART.

Subject I (H. N. B.).

PERIOD No. 1.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chloride as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
July 3	2,200	1.020	10.18	......	0.43	......	0.19	0.56	......	0.57	0.03	......	0.86	25	17.4
4 [a]	1,080	1.030	9.77	......	.52	......	.18	.60	......	.59	......	......	.86	15	17.4
5 [a]	1,375	1.027	9.77	......	.52	......	.18	.60	......	.59	......	......	.86	15	17.4
6	500	1.034	5.18	......	.43	0.09	.10	.52	......	.45	.04	......	.86	20	17.4
7	780	1.032	11.69	......	.78	.04	.25	.58	......	.61	.06	......	1.12	15	9.8
8	1,130	1.028	11.55	......	.61	.05	.24	.58	......	.48	.05	......	.99	10	18.9
9	1,170	1.028	8.68	......	.37	.07	.14	.54	......	.46	.08	......	.77	10	......
Total	8,235	......	66.82	......	3.66	......	1.28	3.98	......	3.75	......	......	6.32	......	......
Mean	1,176	1.028	9.55	......	.52	.062	.18	.57	......	.53	.05	......	.90	16	16.4

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,699	216.28	......	23.79	54.37
Mean	243	30.90	87.27	3.40	7.77

BALANCES FOR PERIOD.

	Grams.		Grams.
Nitrogen in food	92.18	Ether extract in food	766.58
Nitrogen in urine 66.82		Ether extract in feces	54.37
Nitrogen in feces 23.79	90.61		+712.21
	+ 1.57		

[a] Composite.

PERIOD No. 2.—NO PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chloride as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
July 10	1,500	1.026	11.76	9.00	0.52	0.06	0.22	0.63	.....	0.73	0.10	.....	1.14	20	23.8
11[a]	1,090	1.031	10.15	7.96	.44	.09	.18	.60	.....	.52	.08	.....	.91	20	16.3
12[a]	840	1.030	10.15	7.96	.44	.09	.18	.60	.....	.52	.08	.....	.91	20	16.3
13	745	1.030	7.91	6.72	.42	.05	.17	.57	.....	.46	.02	.....	.74	20	10.7
14	890	1.029	10.59	.....	.52	.15	.21	.70	.....	.59	.06	.....	.85	20	11.23
15[a]	540	1.027	11.76	.....	.50	.10	.19	.65	.....	.54	.05	.....	1.00	10	6.4
16[a]	2,190	1.023	11.76	.....	.50	.10	.19	.65	.....	.54	.05	.....	1.00	25	24.4
17	1,610	1.020	10.57	.....	.37	.09	.17	.64	.....	.59	.03	.....	.96	30	16.8
Total	9,405	.....	84.65	.....	3.71	.730	1.51	5.04	.....	4.49	.47	.....	7.51	.....	125.93
Mean	1,176	1.027	10.58	7.91	.46	.091	.19	.63	.....	.56	.06	.....	.94	21	15.74

	Feces.				
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,437	263.55	.....	19.66	24.43
Mean	180	32.94	81.66	2.46	3.05

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		117.97	Ether extract in food	889.27
Nitrogen in urine	84.65		Ether extract in feces	24.43
Nitrogen in feces	19.66	104.31		+864.84
		+13.66		

[a] Composite.

Urine and feces chart.—Subject I (H. N. B.)—Continued.

PERIOD No. 3.—NO PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chloride as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
July 18[a]	1,230	1.026	10.99	9.24	0.42	0.03	0.20	0.62	.....	0.60	0.05	......	0.87	50	12.16
19[a]	1,060	1.027	10.99	9.24	.42	.03	.20	.62	.....	.60	.05	......	.87	50	12.16
20	1,070	1.025	10.29	8.34	.40	.04	.17	.62	.....	.37	.07	......	.68	30	12.87
21	745	1.030	9.80	7.49	.52	.05	.14	.52	.....	.56	.02	......	.86	25	7.28
22	730	1.032	9.52	7.45	.50	.04	.17	.53	.....	.52	.05	......	.95	20	10.76
23	1,190	1.027	10.71	9.29	.40	.05	.20	.60	.....	.52	.08	......	.96	25	15.67
24	1,040	1.028	7.98	6.66	.38	.13	.15	.52	.....	.47	.05	......	1.02	5	15.73
Total	7,065	....	70.28	57.71	3.04	.460	1.23	4.03	.....	3.64	.37	......	6.21	......	86.61
Mean	1,009	1.028	10.04	8.24	.43	.065	.18	.58	.....	.52	.05	......	.89	29	12.37

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,394	249.13	....	18.12	47.40
Mean	199	35.59	82.13	2.59	6.77

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		104.40
Nitrogen in urine	70.28	
Nitrogen in feces	18.12	
		88.40
		+16.00

	Grams.
Ether extract in food	767.30
Ether extract in feces	47.40
	+719.90

[a] Composite.

PERIOD No. 4.—LOW PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
July 25 [a]	940	1.027	7.79	6.56	0.37	0.07	0.16	0.57	.....	0.37	0.06	......	0.91	10	12.4
26 [a]	850	1.028	7.79	6.56	.37	.07	.16	.57	.....	.37	.06	......	.91	10	12.4
27	740	1.029	8.61	7.06	.42	.06	.14	.56	.....	.41	.06	......	.88	30	8.1
28	1,100	1.026	8.19	6.81	.44	.....	.14	.54	.....	.45	.06	......	.68	20	15.4
29	1,250	1.026	8.61	6.99	.53	.05	.19	.61	.....	.46	.06	......	.93	25	19.4
30	755	1.028	7.28	5.64	.41	.07	.13	.60	.....	.47	.05	......	.81	35	10.0
31	840	1.029	8.05	6.92	.36	.03	.14	.57	.....	.44	.05	......	.90	30	10.5
Aug. 1 [a]	1,300	1.025	8.75	7.51	.33	.02	.17	.53	.....	.44	.08	......	1.04	25	13.5
2 [a]	830	1.030	8.75	7.51	.33	.02	.17	.53	.....	.44	.08	......	1.04	25	13.5
Total ..	8,605	....	73.82	61.56	3.56	.....	1.40	5.08	.....	3.85	.56	......	8.10	....	115.2
Mean ..	956	1.029	8.20	6.84	.40	.043	.16	.56	.....	.43	.06	......	.90	23	12.8

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,594	300.47	....	27.10	39.85
Mean	177	33.39	81.15	3.01	4.43

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		116.50	Ether extract in food	918.81
Nitrogen in urine .	73.82		Ether extract in feces ...	39.85
Nitrogen in feces .	27.10			
		100.92		+879.96
		+15.58		

[a] Composite.

Urine and feces chart.—Subject I (H. N. B.)—Continued.

PERIOD No. 5.—LOW PRESERVATIVE.

Date.	URINE.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 3	890	1.031	9.03	7.41	0.39	0.02	0.16	0.55	0.68	0.50	0.07	0.11	1.03	25	12.6
4	855	1.029	8.68	6.88	.39	.04	.14	.58	.68	.50	.07	.11	.75	30	13.1
5	940	1.030	8.54	7.03	.42	.03	.17	.59	.68	.50	.07	.11	.92	30	16.1
6	1,070	1.029	9.80	8.28	.47	.05	.18	.53	.68	.50	.07	.11	1.09	30	12.6
Aug. 7	1,065	1.029	10.15	8.36	.46	.05	.17	.55	.....	.58	.06	......	1.02	35	17.3
Aug. 8[a]	1,000	1.030	9.38	7.69	.42	.06	.16	.52	.....	.46	.07	......	.97	30	12.6
Aug. 9[a]	1,000	1.025	9.38	7.69	.42	.06	.16	.52	.....	.46	.07	......	.97	30	12.6
Total	6,820	......	64.96	53.34	2.97	.31	1.14	3.84	.....	3.50	.48	......	6.75	......	96.9
Mean	974	1.029	9.28	7.62	.42	.044	.16	.55	.68	.50	.07	.11	.96	30	13.8

FECES.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,565	341.33	....	25.04	48.52
Mean	224	48.76	78.19	3.58	6.93

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		109.38	Ether extract in food	795.07
Nitrogen in urine	64.96		Ether extract in feces	48.52
Nitrogen in feces	25.04			+746.55
		90.00		
		+19.38		

[a] Composite.

PERIOD No. 6.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 10......	1,200	1.025	11.27	9.81	0.45	0.08	0.18	0.55	......	0.57	0.10	......	1.09	40	14.0
11......	1,280	1.025	10.15	8.60	.40	.09	.17	.57	0.83	.62	.10	0.11	.84	30	19.4
12......	940	1.030	11.83	10.08	.55	.09	.21	.54	.72	.54	.10	.08	1.19	35	11.2
13......	1,250	1.025	10.85	9.08	.51	.09	.19	.56	.78	.62	.06	.10	1.00	30	14.2
14......	980	1.027	10.85	9.09	.42	.08	.19	.58	.72	.54	.08	.10	.92	30	10.7
15[a]	940	1.029	9.94	8.47	.39	.03	.19	.55	.65	.50	.07	.08	1.02	25	13.5
16[a]	940	1.029	9.94	8.47	.39	.03	.19	.55	.65	.50	.07	.08	1.02	25	13.5
Total ..	7,530	......	74.83	63.60	3.11	.49	1.32	3.90	.....	3.89	.58	......	7.08	......	96.5
Mean ..	1,076	1.027	10.69	9.09	.44	.07	.19	.56	.73	.56	.08	.09	1.01	31	13.8

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	1,301	258.77	....	16.91	37.73
Mean..................	186	36.97	80.11	2.42	5.39

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food.......		115.27
Nitrogen in urine.	74.83	
Nitrogen in feces.	16.91	
		91.74
		+23.53

	Grams.
Ether extract in food...	827.84
Ether extract in feces..	37.73
	+790.11

[a] Composite.

Urine and feces chart.—Subject I (H. N. B.)—Continued.

PERIOD No. 7.—LOW PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 17......	1,140	1.029	11.97	10.07	0.42	.....	0.22	0.60	0.84	0.65	0.06	0.13	1.07	35	16.1
18 *a*.....	780	1.022	11.03	....	.46	0.09	.19	.53	.77	.57	.06	.14	1.05	25	7.7
19 *a*.....	1,450	1.029	11.03	....	.46	.09	.19	.53	.77	.57	.06	.14	1.05	25	17.7
20......	1,400	1.027	13.76	11.93	.46	.04	.23	.65	.89	.69	.07	.13	1.09	40	18.9
21......	1,630	1.0[illegible]5	12.60	10.83	.37	.02	.20	.60	.88	.64	.07	.17	1.02	45	19.4
22 *a*.....	800	1.035	11.76	9.74	.54	.04	.17	.55	.76	.56	.08	.12	1.00	50	12.16
23 *a*.....	1,020	1.029	11.76	9.74	.54	.04	.17	.55	.76	.56	.08	.12	1.00	50	12.16
Total ..	8,220	....	83.91	....	3.25	.....	1.37	4.01	5.67	4.24	.48	.95	7.28	.....	104.12
Mean ..	1,174	1.028	11.99	10.46	.46	.053	.20	.57	.81	.61	.07	.14	1.04	39	14.87

Feces.					
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	1,170	225.11	....	15.21	38.61
Mean..................	167	32.16	80.76	2.17	5.52

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food.......		113.99	Ether extract in food...	824.78
Nitrogen in urine.	83.91		Ether extract in feces...	38.61
Nitrogen in feces.	15.21			
		99.12		+786.17
		+14.87		

a Composite.

PERIOD No. 8.—LOW PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gmr.*	*Gms.*		*Gms.*
Aug. 24	1,140	1.027	12.11	10.14	0.61	0.02	0.16	0.57	0.73	0.58	0.06	0.09	1.02	30	13.3
25	1,365	1.022	11.06	9.22	.47	.....	.17	.58	.68	.53	.07	.08	.79	35	13.3
26	645	1.032	9.70	7.87	.45	.03	.21	.57	.63	.39	.09	.15	.83	25	7.2
27	1,070	1.026	12.18	10.36	.49	.05	.23	.60	.79	.51	.08	.20	1.04	30	11.2
28	1,170	1.028	11.97	10.02	.40	.06	.22	.60	.92	.75	.06	.11	1.18	30	14.9
29 [a]	1,100	1.030	13.16	....	.52	.07	.22	.57	.91	.71	.05	.15	1.09	35	15.6
30 [a]	1,360	1.025	13.16	....	.52	.07	.22	.57	.91	.71	.05	.15	1.09	35	15.6
31	895	1.029	11.76	....	.59	.11	.20	.58	.87	.64	.08	.15	1.10	35	11.7
Total	8,745	....	95.10	....	4.05	.....	1.63	4.64	6.44	4.82	.54	1.08	8.14	.....	102.8
Mean	1,093	1.027	11.89	9.52	.51	.059	.20	.58	.80	.60	.07	.14	1.02	32	12.9

Feces.					
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,367	242.23	....	17.77	38.28
Mean	171	30.28	82.28	2.22	4.78

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		117.25	Ether extract in food	877.73
Nitrogen in urine	95.10		Ether extract in feces	38.28
Nitrogen in feces	17.77			
		112.87		+839.45
		+4.38		

[a] Composite.

Urine and feces chart.—Subject I (H. N. B.)—Continued.

PERIOD No. 9.—LOW PRESERVATIVE.

Date.	URINE. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 1	1,375	1.025	12.36	....	0.54	0.06	0.18	0.57	0.81	0.63	0.04	0.14	1.16	35	15.4
2	1,865	1.019	11.66	9.76	.57	.05	.18	57	.81	.58	.10	.13	.80	30	19.1
3	1,130	1.029	11.92	10.00	.49	.07	.22	.63	.87	.64	.07	.16	1.09	35	15.2
4	1,140	1.028	10.57	8.90	.45	......	.18	.54	.70	.54	.07	.09	.86	30	16.8
5 *a*	950	1.029	11.69	9.90	.46	.02	.21	.57	.74	.53	.08	.13	1.00	30	13.3
6 *a*	1,220	1.028	11.69	9.90	.46	.02	.21	.57	.74	.53	.08	.13	1.00	30	13.3
7 *a*	1,000	1.027	11.69	9.90	.46	.02	.21	.57	.74	.53	.08	.13	1.00	30	13.3
Total	8,680	....	81.58	....	3.43	.....	1.39	4.02	5.41	3.98	.52	.91	6.91	......	106.4
Mean	1,240	1.026	11.65	9.73	.49	.04	.20	.57	.77	.57	.07	.13	.99	33	15.2

FECES.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,040	205.19	....	15.60	33.28
Mean	149	29.31	80.27	2.23	4.75

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		114.79
Nitrogen in urine	81.58	
Nitrogen in feces	15.60	
		97.18
		+17.61

Ether extract in food. Omitted.
Ether extract in feces. Omitted.

a Composite.

PERIOD No. 10.—LOW PRESERVATIVE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 8	950	1.030	11.90	9.91	0.55	0.04	0.18	0.54	0.95	0.65	0.06	0.24	0.98	25	11.7
9	840	1.031	11.20	9.41	.46	.09	.18	54	.77	.56	.08	.13	.87	25	10.5
10	1,030	1.030	11.41	9.81	.37	.08	.21	.57	.83	.65	.04	.14	.91	30	13.3
11	680	1.034	10.50	8.93	.49	.07	.18	.57	.86	.67	.08	.11	.92	35	8.1
12 [a]	1,030	1.027	11.13	9.60	.48	.08	.18	.55	.62	.47	.06	.09	.87	35	11.9
13 [a]	945	1.030	11.13	9.60	.48	.08	.18	.55	.62	.47	.06	.09	.87	35	11.9
14	1,430	1.022	11.54	9.65	.61	.11	.17	.65	.73	.53	.07	.13	.85	30	13.0
Total	6 905	......	78.81	66.91	3.44	.55	1.28	3.97	5.38	4.00	.45	.93	6.27	......	80.4
Mean	987	1.029	11.26	9.56	.49	.079	.18	.57	.77	.57	.06	.13	.90	31	11.5

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,062	224.29	....	14.87	41.42
Mean	152	32.04	78.88	2.12	5.92

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		106.52	Ether extract in food	817.28
Nitrogen in urine	78.81		Ether extract in feces	41.42
Nitrogen in feces	14.87			
		93.68		+775.86
		+12.84		

[a] Composite.

Urine and feces chart.—Subject I (H. N. B.)—Continued.

PERIOD No. 11.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 15......	900	1.028	9.73	8.01	0.49	0.07	0.16	0.61	0.73	0.53	0.07	0.13	0.92	25	10.5
16......	1,360	1.020	10.01	8.26	.53	.09	.14	.54	.65	.44	.06	.15	.85	20	10.5
17......	1,280	1.024	10.08	8.27	.45	.07	.17	.58	.65	.39	.14	.12	.99	30	14.7
18......	1,920	1.017	11.20	9.40	.51	.09	.16	.58	.77	.50	.07	.20	.95	30	14.0
19[a]....	1,775	1.020	10.22	8.64	.42	.07	.19	.54	.76	.45	.11	.20	1.02	25	15.6
20[a]....	1,250	1.025	10.22	8.64	.42	.07	.19	.54	.76	.45	.11	.20	1.02	25	15.6
21......	1,350	1.022	10.57	8.84	.54	.09	.15	.60	.78	.49	.12	.17	.99	30	14.9
Total..	9,835	....	72.03	59.86	3.36	.55	1.16	3.99	5.10	3.25	.68	1.17	6 74	......	95.8
Mean..	1,405	1.022	10.29	8.55	.48	.079	.17	.57	.73	.46	.10	.17	.96	26	13.7

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	985	197.30	....	16.75	23.64
Mean..................	141	28.20	79.97	2.39	3.38

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food........		104.41	Ether extract in food...	903.37
Nitrogen in urine.	72.03		Ether extract in feces..	23.64
Nitrogen in feces.	16.75			+879.73
		88.78		
		+15.63		

[a] Composite.

PERIOD No. 12.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 22......	3,200	1.015	12.54	10.69	0.50	0.14	0.12	0.62	0.94	0.66	0.07	0.21	0.83	35	14.27
23......	1,140	1.027	10.43	8.48	.54	.18	.20	.57	.90	.65	.10	.15	1.03	50	12.87
24......	1,800	1.024	11.69	9.81	.41	.10	.22	.58	.78	.56	.07	.15	1.01	35	22.6
25......	1,140	1.030	9.87	7.97	.47	.10	.18	.61	.84	.60	.08	.16	1.12	40	18.7
26 [a]....	900	1.030	10.64	8.69	.52	.11	.17	.60	.83	.59	.08	.16	.86	45	11.7
27 [a]....	800	1.030	10.64	8.69	.52	.11	.17	.60	.83	.59	.08	.16	.86	45	11.7
28......	1,820	1.022	13.93	11.62	.67	.10	.23	.57	.95	.68	.08	.19	1.07	30	21.0
Total..	10,800	....	79.74	65.95	3.63	.74	1.29	4.15	6.07	4.33	.56	1.18	6.78	......	112.84
Mean..	1,543	1.025	11.39	9.12	.52	.106	.18	.59	.87	.62	.08	.17	.97	40	16.12

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period...	1,206	239.87	......	18.09	25.33
Mean..............	172	34.27	80.11	2.58	3.62

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food.....		104.99	Ether extract in food....	813.69
Nitrogen in urine.	79.71		Ether extract in feces...	25.33
Nitrogen in feces.	18.09	97.83		+788.36
		+7.16		

[a] Composite.

Urine and feces chart.—Subject I (H. N. B.)—Continued.

PERIOD No. 13.—HIGH PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 29	1,340	1.027	10.29	8.04	0.68	0.12	0.17	0.54	1.02	0.76	0.09	0.17	0.90	50	18.2
30	1,690	1.024	11.87	9.96	.58	.09	.21	.60	.85	.63	.06	.16	.92	30	20.5
Oct. 1	1,150	1.025	11.97	10.12	.56	.11	.20	.55	.88	.64	.09	.15	.88	35	13.3
2	1,530	1.026	12.71	10.94	.54	.06	.25	.57	.96	.69	.13	.14	.91	30	18.0
3 [a]	1,440	1.024	11.55	9.77	.45	.10	.20	.56	.82	.58	.08	.16	.88	30	15.9
4 [a]	1,185	1.027	11.55	9.77	.45	.10	.20	.56	.82	.58	.08	.16	.88	30	15.9
5	1,080	1.028	11.41	9.67	.48	.07	.19	.57	.86	.64	.06	.16	.83	40	13.1
Total	9,415	......	81.35	68.27	3.74	.65	1.42	3.95	6.21	4.52	.59	1.10	6.20	......	114.9
Mean	1,345	1.026	11.62	9.75	.53	.093	.20	.56	.89	.65	.08	.16	.89	35	16.4

Feces.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,100	163.24	....	11.00	27.50
Mean	157	23.32	85.16	1.57	3.80

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	111.81	Ether extract in food	845.76
Nitrogen in urine	81.35	Ether extract in feces	27.50
Nitrogen in feces	11.00		+818.26
	92.35		
	+19.46		

[a] Composite.

PERIOD No. 14.—HIGH PRESERVATIVE.

Date.	URINE.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
Oct. 6	1,180	1.031	13.30	11.50	0.51	0.06	0.23	0.58	0.97	0.72	0.10	0.15	1.00	40	15.9
7	1,860	1.021	14.42	12.58	.51	.10	.20	.61	.83	.66	.06	.11	.91	20	15.9
8	1,560	1.023	13.06	11.17	.56	.11	.16	.63	.97	.70	.07	.20	.86	30	15.9
9	1,060	1.027	12.32	10.39	.53	.11	.16	.57	.93	.65	.09	.19	.83	30	15.9
10[a]	860	1.030	12.81	10.98	.46	.08	.20	.57	.85	.59	.08	.18	.88	30	15.9
11[a]	1,280	1.029	12.81	10.98	.46	.08	.20	.57	.85	.59	.08	.18	.88	30	15.9
12	1,060	1.026	9.38	7.78	.43	.08	.14	.50	.72	.49	.04	.19	.79	25	12.5
13	1,200	1.027	11.69	9.63	.49	.05	.17	.60	.84	.58	.07	.19	.84	25	12.5
Total	10,060	......	99.89	85.01	3.95	.67	1.46	4.63	6.96	4.98	.59	1.39	6.99	......	120.4
Mean	1,258	1.027	12.49	10.63	.49	.084	.18	.58	.87	.62	.07	.17	.87	29	15.08

FECES.					
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,192	239.00	....	15.50	23.84
Mean	149	29.88	79.95	1.94	2.98

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		114.05	Ether extract in food	918.93
Nitrogen in urine	99.89		Ether extract in feces	23.84
Nitrogen in feces	15.50	115.39		+895.09
		−1.34		

[a] Composite.

Urine and feces chart.—Subject I (H. N. B.)—Continued.

PERIOD No. 15.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Oct. 14	975	1.030	11.66	9.46	0.44	0.10	0.18	0.61	0.89	0.64	0.09	0.16	0.90	30	12.5
15	800	1.027	9.10	7.38	.36	.07	.14	.60	.71	.47	.09	.15	.70	30	11.4
16	800	1.030	11.69	9.65	.49	.07	.17	.56	.83	.57	.08	.18	.77	30	11.4
17[a]	1,300	1.026	11.41	9.70	.44	.07	.22	.58	.78	.58	.08	.12	.91	25	11.4
18[a]	1,240	1.029	11.41	9.70	.44	.07	.22	.58	.78	.58	.08	.12	.91	25	11.4
19	1,720	1.020	11.69	9.49	.49	.10	.17	.57	.81	.61	.07	.13	.88	35	14.9
20	1,400	1.022	10.15	8.15	.43	.10	.16	.57	.78	.55	.07	.16	.76	30	14.9
21	1,040	1.030	10.92	8.84	.47	.11	.18	.57	.82	.53	.10	.19	.90	30	14.9
22	1,200	1.027	9.73	8.01	.38	.07	.18	.57	.77	.49	.08	.20	.82	35	15.2
23	1,750	1.020	11.80	9.72	.46	.10	.16	.57	.83	.58	.09	.16	.90	40	15.2
Total	12,225	......	109.56	90.10	4.40	.86	1.78	5.78	8.00	5.60	.83	1.57	8.45	......	133.2
Mean	1,223	1.026	10.96	9.01	.44	.086	.18	.58	.80	.56	.08	.16	.85	31	13.3

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,535	304.24	....	19.96	41.45
Mean	154	30.43	80.18	2.00	4.15

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	142.92	Ether extract in food	1,309.96
Nitrogen in urine 109.56		Ether extract in feces	41.45
Nitrogen in feces 19.96	129.52		+1,268.51
	+13.40		

[a] Composite.

PERIOD No. 16. NO PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*
Oct. 24[a]	1,980	1.018	10.36	8.53	0.39	0.10	0.17	0.55	0.75	0.54	0.07	0.14	0.86	30	15.2
25[a]	1,650	1.022	10.36	8.53	.39	.10	.17	.55	.75	.54	.07	.14	.86	30	15.2
26	1,720	1.022	10.71	9.01	.37	.11	.17	.55	.77	.53	.08	.16	.95	35	11.7
27	1,400	1.020	9.80	8.00	.44	.10	.17	.57	.81	.58	.07	.16	.77	30	11.7
28	1,580	1.030	10.36	8.49	.44	.07	.19	.55	.81	.58	.09	.11	.96	35	11.7
29															
30	2,050	1.020	10.29	8.70	.44	.08	.14	.52	.84	.58	.07	.19	......	25	11.7
Total															
Mean	1,730	1.022	10.31	8.54	.41	.093	.17	.55	.79	.56	.08	.16	.88	31	12.9

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,633	333.20	....	22.86	26.13
Mean	233	47.60	79.59	3.27	3.73

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	100.95	Ether extract in food	912.28
Nitrogen in urine. 72.19		Ether extract in feces	26.13
Nitrogen in feces. 22.86			
	95.05		+886.15
	+5.90		

[a] Composite.

Urine and feces chart—Continued.

Subject II (W. W. C.),

PERIOD No. 1.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
July 3	1,595	1.025	14.58	......	0.44	0.03	0.23	0.63	....	0.85	0.05	......	1.04	6	16.7
4 *a*	1,440	1.029	14.28	......	.55	.10	.16	.66	....	.91	.07	......	1.04	10	16.7
5 *a*	1,020	1.032	14.28	......	.55	.10	.16	.66	....	.91	.07	......	1.04	10	16.7
6	1,050	1.030	12.74	......	.45	.07	.19	.57	....	.80	.09	......	1.04	5	16.7
7	1,250	1.031	14.42	......	.48	.06	.23	.64	....	.74	......	......	1.07	5	18.0
8	1,510	1.027	17.29	......	.65	.07	.26	.75	....	.98	.05	......	1.27	6	18.4
9	1,560	1.027	14.56	......	.40	.08	.23	.63	....	.85	.07	......	1.09	5	......
Total	9,425	......	102.15	......	3.52	.51	1.46	4.54	....	6.04	......	......	7.59	......	......
Mean	1,346	1.029	14.59	......	.50	.073	.21	.65	....	.86	.07	......	1.08	7	17.2

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,236	295.28	......	18.54	55.62
Mean	177	42.18	76.11	2.65	7.95

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	107.78	Ether extract in food	829.51
Nitrogen in urine 102.15		Ether extract in feces	55.62
Nitrogen in feces 18.54			
	120.69		+773.89
	−12.91		

a Composite.

PERIOD No. 2.—NO PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total surphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.		Gms.
July 10	1,940	1.023	15.12	13.62	0.66	0.10	0.27	0.63	.....	0.97	0.03	.....	1.01	5	23.6
11 a	990	1.028	11.41	9.52	.48	.07	.20	.58	...	.70	.08	.....	.81	5	9.8
12 a	1,050	1.024	11.41	9.52	.48	.07	.20	.58	...	.70	.08	.....	.81	5	9.8
13	1,180	1.029	14.35	12.54	.54	.10	.28	.76	.....	.79	.09	.....	1.01	5	11.9
14	770	1.031	9.31	.....	.21	.05	.15	.55	.....	.57	.08	.....	.58	5	12.4
15	1,200	1.030	16.45	.....	.65	.02	.22	.80	.....	.95	.09	.....	1.22	5	14.0
16	1,500	1.021	12.95	.....	.47	.13	.20	.73	.....	.76	.08	.....	.89	5	14.0
17	1,000	1.028	11.37	.....	.39	.10	.19	.69	.....	.61	.06	.....	.71	5	5.9
Total	9,630	.....	102.37	.....	3.88	.64	1.71	5.32	...	6.05	.59	..	7.04	.	101.4
Mean	1,204	1.027	12.79	11.30	.49	.08	.21	.67	.....	.76	.07	.....	.88	5	12.7

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	894	258.28	.....	17.85	25.03
Mean	112	32.28	71.11	2.23	3.13

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		29.39	Ether extract in food	965.55
Nitrogen in urine	102.37		Ether extract in feces	25.03
Nitrogen in feces	17.85			
		120.22		+940.52
		+9.37		

a Composite.

Urine and feces chart.—Subject II (W. W. C.)—Continued.

PERIOD No. 3.—NO PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
July 18 a	1,470	1.028	14.14	12.14	0.46	0.02	0.21	0.70	....	0.80	0.05	......	1.07	5	17.5
19 a	1,860	1.020	14.14	12.14	.46	.02	.21	.70	....	.80	.05	......	1.07	5	17.5
20 a	1,260	1.024	14.21	12.15	.49	.07	.18	.66	....	.77	.06	......	.85	5	9.59
21	1,180	1.030	13.51	11.40	.40	.....	.23	.68	....	.72	.07	......	1.02	5	13.80
22	895	1.029	10.43	8.55	.41	.10	.14	.53	....	.61	.07	......	.60	5	10.29
23	925	1.030	11.34	9.32	.38	.08	.20	.63	....	.67	.08	......	.74	5	11.46
24	1,275	1.027	11.76	9.98	.44	.....	.21	.63	....	.74	.08	......	.88	5	17.08
Total	8,865	....	89.53	75.68	3.04	....	1.38	4.53	..	5.11	.46	.....	6.23	....	97.22
Mean	1,266	1.027	12.79	10.81	.43	.058	.20	.65	....	.73	.07	.....	.89	5	13.89

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,228	269.30	....	18.42	41.75
Mean	175	38.47	78.07	2.63	5.96

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		114.31
Nitrogen in urine	89.53	
Nitrogen in feces	18.42	
		107.95
		+6.36

	Grams.
Ether extract in food	788.58
Ether extract in feces	41.75
	+746.83

a Composite.

PERIOD No. 4.—LOW PRESERVATIVE.

Urine.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.
July 25	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
26	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
27	1,035	1.032	12.18	10.38	0.39	0.06	0.18	0.66	......	0.73	0.09	......	0.90	10	13.8
28	730	1.031	9.38	8.09	.36	.03	.13	.50	......	.54	.05	......	.69	5	10.5
29	975	1.031	10.78	9.05	.37	.10	.19	.63	......	.59	.08	......	.87	5	14.5
30	920	1.033	10.71	8.89	.41	.08	.21	.66	......	.59	.09	......	.81	5	14.0
31	1,600	1.020	10.89	9.10	.42	.04	.19	.63	......	.61	.06	......	.68	5	14.5
Aug. 1[a]	960	1.025	8.12	6.82	.38	.05	.15	.54	......	.49	.08	......	.76	5	9.12
2[a]	750	1.031	8.12	6.82	.38	.05	.15	.54	......	.49	.08	......	.76	5	9.12
Total	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Mean	996	1.029	10.03	8.45	.39	.058	.17	.59	......	.58	.08	......	.78	6	12.22

Feces.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,489	377.01	......	25.31	64.03
Mean	165	41.89	74.68	2.81	7.11

BALANCES FOR PERIOD.

	Grams.			Grams.
Nitrogen in food		130.73	Ether extract in food	1,029.40
Nitrogen in urine	90.62		Ether extract in feces	64.03
Nitrogen in feces	25.31			
		115.93		+965.37
		+14.80		

[a] Composite.

Urine and feces chart.—Subject II (*W. W. C.*)—Continued.

PERIOD No. 5.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 3	640	1.030	9.31	7.80	0.36	0.03	0.15	0.55	.....	0.55	0.07	......	0.80	5	6.5
4	725	1.027	8.26	....	.33	.....	.18	.57	.....	.55	.07	......	.80	5	7.4
5	845	1.031	11.83	10.13	.37	.....	.25	.63	.....	.55	.07	......	.97	5	7.7
6	980	1.031	10.08	....	.39	.02	.19	.63	.....	.55	.07	......	.91	5	8.6
7	1,540	1.023	10.71	9.25	.40	.07	.19	.60	.....	.61	.06	......	.90	5	16.3
8 *a*	1,490	1.025	11.34	9.35	.61	.06	.18	.61	.....	.75	.08	......	1.00	5	15.6
9 *a*	1,500	1.021	11.34	9.35	.61	.06	.18	.61	.....	.75	.08	......	1.00	5	15.6
Total	7,720	....	72.87	....	3.07	.....	1.32	4.20	.....	4.31	.50	......	6.38	.....	77.7
Mean	1,103	1.027	10.41	9.18	.44	.048	.19	.60	.....	.62	.07	......	.91	5	11.1

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,115	299.94	....	18.96	31.22
Mean	159	42.85	73.10	2.71	4.46

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	93.07	Ether extract in food	720.56
Nitrogen in urine.. 72.87		Ether extract in feces	31.22
Nitrogen in feces... 18.96	91.83		+689.34
	+1.24		

a Composite.

PERIOD No. 6.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*
Aug. 10	1,270	1.025	11.30	9.80	0.39	0.09	0.21	0.61	.....	0.68	0.07	.....	0.89	5	14.2
11	1,120	1.026	11.20	9.72	.43	.08	.18	.63	0.80	.65	.07	0.08	.81	5	13.1
12	1,150	1.026	11.41	9.83	.39	.05	.21	.60	.80	.63	.07	.10	.91	5	11.0
13	1,050	1.029	11.06	9.51	.33	.10	.20	.65	.80	.63	.08	.09	.99	5	12.1
14	1,190	1.025	11.76	10.00	.35	.08	.23	.66	.87	.67	.08	.12	.88	5	10.5
15 [a]	640	1.033	9.94	8.59	.36	.05	.18	.62	.75	.58	.07	.10	.87	5	7.7
16 [a]	960	1.027	9.94	8.59	.36	.05	.18	.62	.75	.58	.07	.10	.87	5	7.7
Total	7,380	......	76.61	66.04	2.61	.50	1.39	4.39	.....	4.42	.51	.....	6.22	......	76.3
Mean	1,054	1.027	10.94	9.43	.37	.071	.20	.63	.80	.63	.07	.10	.89	5	10.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,142	367.50	....	17.13	49.11
Mean	163	52.50	67.82	2.45	7.02

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		101.07
Nitrogen in urine	76.61	
Nitrogen in feces	17.13	
		93.74
		+7.33

	Grams.
Ether extract in food	922.50
Ether extract in feces	49.11
	+873.39

[a] Composite.

Urine and feces chart,—Subject II (*W. W. C.*—Continued.

PERIOD No. 7.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 17	880	1.032	11.34	9.79	0.35	0.03	0.21	0.69	0.81	0.63	0.08	0.10	0.77	5	9.82
18	1,215	1.026	10.85	9.29	.37	.06	.18	.60	.71	.56	.07	.08	.88	5	8.89
19 *a*	980	1.023	11.93	....	.39	.09	.18	.60	.86	.66	.09	.11	.95	5	9.12
20 *a*	2,140	1.020	11.93	....	.39	.09	.18	.60	.86	.66	.09	.11	.91	5	18.01
21	1,340	1.027	12.32	10.24	.47	.03	.20	.66	.88	.61	.15	.12	.75	5	18.2
22 *a*	920	1.026	9.80	7.90	.40	.04	.16	.60	.72	.56	.06	.10	.80	5	12.16
23 *a*	1,790	1.021	9.80	7.90	.40	.04	.16	.60	.72	.56	.06	.10	.80	5	12.1
Total	9,265	....	77.97	....	2.77	.38	1.27	4.29	5.56	4.24	.60	.72	5.86	......	88.30
Mean	1,324	1.025	11.14	9.02	.40	.054	.18	.61	.79	.61	.09	.10	.83	5	12.61

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	986	277.66	....	16.76	44.37
Mean	141	39.67	71.84	2.39	6.34

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		109.19	Ether extract in food	840.25
Nitrogen in urine	77.97		Ether extract in feces	44.37
Nitrogen in feces	16.76			
		94.73		+795.88
		+14.46		

a Composite.

PERIOD No. 8. LOW PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 24	1,220	1.027	12.20	10.39	0.46	0.02	0.22	0.63	0.88	0.75	0.08	0.05	1.10	5	12.4
25	1,100	1.022	9.05	7.52	.39	.02	.14	.50	.66	.55	.07	.04	.84	5	9.8
26	1,140	1.026	11.90	10.12	.49	.05	.22	.62	.77	.62	.06	.09	.87	5	10.7
27	1,700	1.022	11.90	10.17	.39	.06	.22	.67	1.14	.92	.08	.14	.74	5	17.5
28	1,440	1.021	11.20	9.30	.54	.03	.21	.66	.75	.61	.05	.09	.82	5	14.7
29[a]	1,075	1.028	10.43	....	.38	.06	.21	.62	.81	.60	.07	.14	.93	5	14.5
30[a]	1,080	1.029	10.43	....	.38	.06	.21	.62	.81	.60	.07	.14	.93	5	14.5
31	920	1.030	10.64	....	.35	.09	.17	.63	.87	.64	.06	.17	.95	5	10.5
Total	9,675	....	87.75	....	3.38	.39	1.60	4.95	6.69	5.29	.54	.86	7.18	......	106.6
Mean	1,209	1.026	10.97	9.50	.42	.049	.20	.62	.84	.66	.07	.11	.90	5	13.1

Feces.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,222	311.98	....	22.00	40.33
Mean	153	39.00	74.47	2.75	5.04

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	122.89	Ether extract in food	948.52
Nitrogen in urine 87.75		Ether extract in feces	40.33
Nitrogen in feces 22.00			
	109.75		+908.19
	+13.14		

[a] Composite.

Urine and feces chart.—Subject II (W. W. C.)—Continued.

PERIOD No. 9.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 1	860	1.026	7.91	....	0.21	0.03	0.11	0.42	0.64	0.50	0.05	0.09	0.82	5	9.7
2	1,610	1.021	11.62	9.90	.38	.04	.19	.65	.83	.63	.09	.11	.97	5	14.7
3	1,330	1.027	14.00	11.89	.46	.05	.22	.72	1.08	.84	.10	.14	.83	5	15.2
4	1,460	1.024	13.09	11.25	.48	.03	.20	.65	.93	.69	.11	.13	.92	10	15.4
5 [a]	1,665	1.022	11.06	9.38	.35	.04	.20	.66	.80	.60	.07	.13	.86	5	13.5
6 [a]	1,285	1.024	11.06	9.38	.35	.04	.20	.66	.80	.60	.07	.13	.86	5	13.5
7 [a]	1,285	1.023	11.06	9.38	.35	.04	.20	.66	.80	.60	.07	.13	.86	5	13.5
Total	9,495	....	79.80	....	2.58	.27	1.32	4.42	5.88	4.46	.56	.86	6.12	......	95.5
Mean	1,356	1.024	11.40	10.20	.37	.039	.19	.63	.84	.64	.08	.12	.87	6	13.6

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	760	255.89	....	16.72	39.52
Mean	109	36.56	66.33	2.39	5.65

BALANCES FOR PERIOD.

		Grams.	
Nitrogen in food		114.59	Ether extract in food. Omitted.
Nitrogen in urine	79.80		Ether extract in feces. Omitted.
Nitrogen in feces	16.72		
		96.52	
		+18.07	

[a] Composite.

PERIOD No 10.—LOW PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 8	1,140	1.025	10.78	9.26	0.39	0.04	0.16	0.55	0.81	0.63	0.08	0.10	0.69	10	11.2
9	840	1.031	11.90	10.06	.44	.07	.19	.61	.88	.65	.09	.14	.74	10	7.9
10	890	1.033	11.06	9.27	.29	.07	.23	.63	.79	.61	.04	.14	.95	10	10.5
11	1,040	1.032	10.78	9.03	.31	.06	.19	.68	.91	.72	.07	.12	.93	10	15.2
12 *a*	800	1.032	11.16	9.52	.35	.....	.....	.63	.72	.58	.08	.06	.99	10	4.6
13 *a*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
14	1,150	1.029	13.83	12.03	.29	.14	.24	.75	.86	.66	.09	.11	1.03	10	10.5
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mean	977	1.030	11.59	9.86	.35	.076	.20	.64	.83	.64	.08	.11	.89	10	10.0

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	692	224.83	.....	14.53	30.45
Mean	99	32.12	67.51	2.08	4.35

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	106.55	Ether extract in food	799.07
Nitrogen in urine 81.13		Ether extract in feces	30.45
Nitrogen in feces 14.53			
	95.66		+768.62
	+10.89		

a Composite.

Urine and feces chart:—Subject II (W. W. C.)—Continued.

PERIOD No. 11.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 15......	1,150	1.027	12.50	10.69	0.33	0.04	0.19	0.66	0.86	0.66	0.09	0.11	0.75	10	14.0
16......	1,500	1.022	11.48	9.87	.41	.10	.17	.61	.84	.65	.08	.11	.91	10	15.4
17......	1,620	1.023	12.08	10.42	.39	.08	.20	.68	.86	.65	.07	.14	.98	15	18.7
18......	1,140	1.028	12.20	10.46	.45	.09	.19	.66	.93	.70	.08	.15	.91	10	13.5
19[a]....	1,430	1.025	12.11	10.30	.34	.10	.20	.64	.98	.76	.09	.13	.93	15	11.7
20[a]....	870	1.030	12.11	10.30	.34	.10	.20	.64	.98	.76	.09	.13	.93	15	11.7
21.. ...	1,130	1.030	13.50	11.75	.41	.10	.22	.60	.98	.71	.11	.16	1.02	10	11.2
Total...	8,840	......	85.98	73.79	2.67	.61	1.37	4.49	6.43	4.89	.61	.93	6.43	......	96.20
Mean...	1,263	1.026	12.28	10.54	.38	.087	.20	.64	.92	.70	.09	.13	.92	12	13.7

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	517	189.64	....	10.96	27.92
Mean.................	74	27.09	63.32	1.57	3.99

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food.......		104.97
Nitrogen in urine	85.98	
Nitrogen in feces.	10.96	
		96.94
		+8.03

	Grams.
Ether extract in food....	854.52
Ether in extract of feces.	27.92
	+826.60

[a] Composite.

PERIOD No. 12.—HIGH PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 22......	1,300	1.023	12.99	11.16	0.46	0.10	0.20	0.70	1.05	0.81	0.10	0.14	0.82	10	14.9
23......	1,250	1.030	13.20	11.53	.34	.08	.21	.61	.99	.76	.10	.13	1.02	15	15.9
24......	1,730	1.024	13.58	11.43	.44	.08	.22	.68	1.04	.78	.10	.16	1.02	10	21.0
25......	1,100	1.026	11.84	9.77	.53	.09	.20	.72	1.05	.79	.10	.16	.94	10	17.5
26 [a].....	950	1.029	11.20	....	.49	.12	.17	.66	.92	.65	.08	.19	.74	5	11.7
27 [a].....	960	1.028	11.20	....	.49	.12	.17	.66	.92	.65	.08	.19	.74	5	11.7
28......	1,400	1.026	12.08	10.19	.49	.06	.20	.63	.89	.66	.09	.14	.78	10	16.3
Total...	8,690	....	86.09	....	3.24	.65	1.37	4.66	6.86	5.10	.65	1.11	6.06	.....	109.0
Mean...	1,241	1.027	12.30	10.82	.46	.093	.20	.67	.98	.73	.09	.16	.87	9	15.6

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	894	237.09	....	17.88	31.29
Mean................	128	33.87	73.48	2.55	4.47

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food........	113.47	Ether extract in food ...	811.65
Nitrogen in urine 86.09		Ether extract in feces....	31.29
Nitrogen in feces, 17.88	103.97		+780.36
	+9.50		

[a] Composite.

Urine and feces chart.—Subject II (W. W. C.)—Continued.

PERIOD No. 13.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 29	1,060	1.027	11.17	9.43	0.47	0.07	0.19	0.60	0.98	0.78	0.06	0.14	0.90	10	11.7
30	1,460	1.028	12.53	10.55	.36	.11	.25	.75	.93	.72	.09	.12	1.18	10	20.1
Oct. 1	1,100	1.027	13.37	11.30	.60	.11	.20	.66	.96	.77	.08	.11	.95	10	11.2
2	1,600	1.023	13.16	11.50	.54	.07	.28	.63	1.00	.75	.09	.16	.95	15	15.2
3 [a]	860	1.025	10.19	8.50	.50	.12	.17	.57	.77	.55	.07	.15	.71	20	8.1
4 [a]	1,070	1.021	10.19	8.50	.50	.12	.17	.57	.77	.55	.07	.15	.71	20	8.1
5	870	1.029	10.40	8.58	.45	.10	.22	.63	.88	.64	.07	.17	.61	15	10.9
Total	8,020	......	81.01	68.36	3.42	.70	1.48	4.41	6.29	4.76	.53	1.00	6.01	......	65.3
Mean	1,146	1.026	11.57	9.77	.49	.10	.21	.63	.90	.68	.08	.14	.86	14	9.3

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,451	308.92	....	18.86	44.98
Mean	207	44.13	78.71	2.69	6.43

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	91.11	Ether extract in food	620.11
N trogen in urine	81.01	Ether extract in feces	44.98
Nitrogen in feces	18.86		+575.13
	99.87		
	−8.76		

[a] Composite.

PERIOD No. 14.—HIGH PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gm.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.		Gms.
Oct. 6	960	1.030	11.55	9.89	0.53	0.03	0.22	0.63	0.88	0.63	0.09	0.16	0.65	15	10.7
7	1,550	1.021	10.96	9.27	.46	.09	.22	.63	.81	.58	.08	.15	.52	15	10.7
8	1,260	1.023	9.59	7.88	.45	.13	.17	.58	.79	.56	.08	.15	.47	10	10.7
9	1,460	1.020	12.32	10.09	.54	.11	.20	.60	.91	.66	.09	.16	.67	10	10.7
10 a	810	1.025	8.26	6.89	.32	.06	.18	.60	.60	.40	.07	.13	.56	10	10.7
11 a	480	1.031	8.26	6.89	.32	.06	.18	.60	.60	.40	.07	.13	.56	10	10.7
12 a	1,860	1.024	15.96	13.46	.60	.11	.32	.60	1.11	.77	.10	.24	1.04	10	12.4
13	540	1.028	9.05	7.44	.33	.....	.....	.63	.70	.47	.08	.15	.58	10	12.4
Total	8,920	....	85.95	71.81	3.55	.....	.....	4.87	6.40	4.47	.66	1.27	5.05	.....	89.0
Mean	1,115	1.025	10.74	8.98	.44	.084	.21	.61	.80	.56	.08	.16	.63	11	11.1

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,072	253.32	....	16.08	48.24
Mean	134	31.67	76.37	2.01	6.03

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		105.05
Nitrogen in urine	85.95	
Nitrogen in feces	16.08	
		102.03
		+3.02

	Grams.
Ether extract in food	828.02
Ether extract in feces	48.24
	+779.78

a Composite.

Urine and feces chart.—Subject II (W. W. C.)—Continued.

PERIOD No. 15.—HIGH PRESERVATIVE.

Date.	URINE. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Oct. 14	1,040	1.030	9.05	7.44	0.33	0.13	0.19	0.75	0.70	0.47	0.08	0.15	0.58	10	12.4
15	940	1.030	10.71	8.79	.38	.06	.19	.71	.82	.57	.09	.16	.69	10	11.7
16	760	1.032	8.86	7.21	.32	.06	.17	.63	.63	.44	.08	.11	.65	10	11.7
17 [a]	1,020	1.031	11.06	9.31	.25	.04	.25	.66	.86	.63	.06	.17	.80	10	11.7
18 [a]	1,280	1.027	11.06	9.31	.25	.04	.25	.66	.86	.63	.06	.17	.80	10	11.7
19	1,220	1.027	13.51	11.56	.47	.09	.18	.66	1.05	.80	.09	.16	.85	10	13.3
20	1,440	1.022	12.18	10.35	.36	.10	.16	.63	.85	.62	.09	.14	.76	10	13.3
21	1,080	1.026	9.35	7.55	.28	.09	.15	.60	.67	.47	.07	.13	.68	10	13.3
22	1,020	1.028	9.59	7.72	.37	.06	.19	.60	.84	.60	.07	.17	.70	15	14.9
23	1,140	1.026	9.94	8.03	.30	.13	.14	.61	.81	58	.10	.13	.70	15	14.9
Total	10,940	......	105.31	87.27	3.31	.80	1.87	6.51	8.09	5.81	.79	1.49	7.21	......	128.9
Mean	1,094	1.028	10.53	8.73	.33	.08	.19	.65	.81	.58	.08	.15	.72	11	12.89

FECES.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	831	265.92	....	15.79	31.58
Mean	83	26.59	68.00	1.58	3.16

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	146.81	Ether extract in food	1,415.92
Nitrogen in urine 105.31		Ether extract in feces	31.58
Nitrogen in feces 15.79	121.10		+1,384.34
	+25.71		

[a] Composite.

PERIOD No. 16.—NO PRESERVATIVE.

Urine.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gm.		Gms.
Oct. 24 [a]	1,425	1.022	10.92	9.09	0.29	0.10	0.18	0.61	0.82	0.61	0.07	0.14	0.84	10	14.9
25 [a]	1,370	1.023	10.92	9.09	.29	.10	.18	.61	.82	.61	.07	.14	.84	10	14.9
26	1,080	1.029	11.48	9.59	.35	.11	.24	.61	.88	.62	.10	.16	.80	10	13.8
27	1,570	1.024	10.15	8.36	.31	.08	.20	.60	.81	.56	.08	.17	.68	10	13.8
28	1,230	1.023	7.32	5.93	.22	.05	.15	.49	.60	.40	.06	.14	.52	10	13.8
29	1,940	1.025	10.36	8.42	.33	.07	.20	.73	.84	.56	.10	.18	1.00	10	13.8
30	1,020	1.023	7.98	6.50	.32	.05	.13	.52	.79	.52	.05	.22	.....	10	13.8
Total	9,635	....	69.13	56.98	2.11	.56	1.28	4.17	5.56	3.88	.53	1.15	.....	.....	98.8
Mean	1,376	1.024	9.88	8.14	.30	.08	.18	.60	.79	.55	.08	.16	.78	10	14.1

Feces.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	865	253.27	....	17.30	26.82
Mean	124	36.18	70.72	2.47	3.83

Balances for Period.

	Grams.		Grams.
Nitrogen in food	92.41	Ether extract in food	929.29
Nitrogen in urine	69.13	Ether extract in feces	26.82
Nitrogen in feces	17.30		
	86.43		+902.45
	+5.98		

[a] Composite

Urine and feces chart.—Continued.

Subject III (A. G.).

PERIOD NO. 1.—NO PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
July 3	1,640	1.025	14.60	....	0.80	0.04	0.20	0.69	.....	0.80	0.04	......	1.19	35	21.7
4 [a]	1,560	1.027	14.14	....	.82	.05	.19	.64	.....	.72	.15	......	1.19	35	21.7
5 [a]	1,615	1.024	14.14	....	.82	.05	.19	.64	.....	.72	.15	......	1.19	35	21.7
6	1,595	1.024	11.97	....	.83	.05	.19	.70	.....	.80	.06	......	1.19	25	21.7
7	2,135	1.022	14.77	....	.93	.02	.25	.73	.....	.78	.17	......	1.04	40	15.9
8	1,590	1.026	13.65	....	.73	.....	.23	.73	.....	.84	.06	......	1.09	40	23.6
9	1,255	1.031	14.77	....	.77	.06	.21	.75	.....	.93	.08	......	1.31	25	....
Total	11,390	....	98.04	....	5.70	.....	1.46	4.88	.....	5.59	.71	......	8.20	......	....
Mean	1,627	1.025	14.01	....	.81	.045	.21	.69	.....	.79	.10	......	1.17	34	21.05

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,419	210.15	....	15.61	31.22
Mean	203	30.2	85.19	2.23	4.46

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		114.55
Nitrogen in urine	98.04	
Nitrogen in feces	15.61	
		113.65
		+.90

	Grams.
Ether extract in food	1,080.16
Ether extract in feces	31.22
	+1,048.94

[a] Composite.

PERIOD NO. 2. NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
July 10	1,742	1.030	17.50	....	0.79	.....	.....	0.75	.....	1.09	0.08	......	1.35	40	28.0
11 [a]	1,300	1.031	15.12	11.81	.79	0.04	0.25	.75	.....	.88	.09	......	1.20	45	19.8
12 [a]	990	1.030	15.12	11.81	.79	.04	.25	.75	.....	.88	.09	......	1.20	45	19.8
13	870	1.031	11.83	9.57	.79	.05	.18	.69	.....	.62	.08	......	.92	20	14.7
14	1,420	1.023	13.09	....	.86	.05	.18	.75	.....	.77	.08	......	.97	35	15.4
15	1,030	1.028	12.35	....	.87	.03	.18	.70	.....	.76	.06	......	1.01	25	14.7
16	1,570	1.023	14.91	....	.76	.05	.24	.75	.....	.81	.07	......	1.09	30	21.0
17	1,095	1.029	14.56	....	.82	.07	.21	.80	.....	.60	......	......	.90	50	10.7
Total	10,017	....	114.48	....	6.47	.....	.....	5.94	.....	6.41	......	......	8.64	.....	144.1
Mean	1,252	1.028	14.31	11.06	.81	.047	.21	.74	.....	.80	.08	......	1.08	36	18.0

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,708	265.59	....	16.97	25.62
Mean	213	33.20	84.45	2.12	3.20

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	135.32	Ether extract in food	1,174.37
Nitrogen in urine 114.48		Ether extract in feces	25.62
Nitrogen in feces 16.97	131.45		+1,148.75
	+3.87		

[a] Composite.

Urine and feces chart.—Subject III (A. G.)—Continued.

PERIOD NO. 3.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
July 18 [a]	1,355	1.029	13.93	11.41	0.76	......	0.20	0.75	......	0.71	0.08	......	0.95	50	20.2
19 [a]	1,390	1.026	13.93	11.41	.76	......	.20	.75	......	.71	.08	......	.95	50	20.2
20 [a]	1,118	1.024	12.25	9.90	.66	......	.19	.75	......	.72	.07	......	1.02	45	18.2
21 [a]	1,370	1.029	12.25	9.90	.66	......	.19	.75	......	.72	.07	......	1.02	45	18.2
22	1,200	1.026	11.90	9.65	.70	0.03	.17	.73	......	.64	.08	......	.95	40	14.5
23	1,260	1.024	11.83	9.58	.70	.05	.19	.73	......	.62	.11	......	.85	80	13.5
24	1,070	1.029	11.62	9.58	.71	......	.21	.66	......	.74	.10	......	1.01	65	16.8
Total	8,763	......	87.71	71.43	4.95	......	1.35	5.12	......	4.86	.59	......	6.75	......	121.6
Mean	1,252	1.027	12.53	10.20	.71	.04	.19	.73	......	.69	.08	......	.96	54	17.4

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	2,164	553.33	......	20.77	60.59
Mean	309	79.05	74.43	2.97	8.66

BALANCES FOR PERIOD.

	Grams.
Nitrogen in food	119.21
Nitrogen in urine 87.71	
Nitrogen in feces 20.77	
	108.48
	+10.73

	Grams.
Ether extract in food	1,072.04
Ether extract in feces	60.59
	+1,011.45

[a] Composite.

PERIOD No. 4.—LOW PRESERVATIVE.

Urine.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gm.	Gms.		Gms.
July 25 [a]	940	1.031	10.01	8.11	0.57	.....	0.21	0.60	.....	0.47	0.08	.....	0.89	50	13.5
26 [a]	1,120	1.029	10.01	8.11	.57	.....	.21	.60	.....	.47	.08	.....	.89	50	13.5
27	970	1.031	10.50	8.44	.65	0.03	.21	.68	.....	.62	.09	.....	.87	60	16.8
28	1,390	1.026	11.27	9.08	.76	.....	.18	.68	.....	.66	.09	.....	.82	60	21.0
29	1,680	1.020	11.62	9.49	.77	.05	.18	.66	.....	.60	.08	.....	.94	50	18.0
30	1,035	1.029	10.64	8.44	.72	.07	.19	.74	.....	.64	.09	.....	.97	50	14.5
31	1,010	1.030	11.41	9.35	.67	.....	.23	.69	.....	.62	.04	.....	1.00	35	15.4
Aug. 1 [a]	1,035	1.029	11.15	9.39	.76	.....	.21	.62	.....	.61	.09	.....	1.02	35	18.9
2 [a]	1,160	1.029	11.15	9.39	.76	.....	.21	.62	.....	.61	.09	.....	1.02	35	18.9
Total	10,340	.....	97.76	79.80	6.23	.....	1.83	5.89	.....	5.30	.73	.....	8.42	.....	150.5
Mean	1,149	1.028	10.86	8.87	.69	.05	.20	.65	.....	.59	.08	.....	.94	47	16.7

Feces.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,954	317.33	.....	21.49	60.57
Mean	217	35.26	83.76	2.39	6.73

Balances for Period.

		Grams.		Grams.
Nitrogen in food		129.83	Ether extract in food	1,378.97
Nitrogen in urine	97.76		Ether extract in feces	60.57
Nitrogen in feces	21.49	119.25		
		+10.58		+1,318.40

[a] Composite.

Urine and feces chart.—Subject III (A. G.)—Continued.

PERIOD No. 5.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 3	1,065	1.027	9.20	7.62	0.60	......	0.15	0.55	0.82	0.65	0.06	0.11	0.77	40	16.3
4	1,130	1.027	10.64	8.68	.67	......	.18	.68	.82	.65	.06	.11	.89	25	17.3
5	1,120	1.031	12.11	10.10	.68	......	.22	.73	.82	.65	.06	.11	1.03	35	19.4
6	1,480	1.026	12.74	10.75	.77	......	.21	.66	.82	.65	.06	.11	1.01	35	18.0
7	1,310	1.027	10.92	8.94	.71	0.02	.21	.64	......	.66	.05	......	.95	30	19.4
8 *a*	1,630	1.022	11.62	9.62	.73	.03	.19	.65	......	.66	.07	......	.92	40	19.8
9 *a*	1,400	1.024	11.62	9.62	.73	.03	.19	.65	......	.66	.07	......	.92	40	19.8
Total	9,135	......	78.85	65.33	4.89	......	1.35	4.56	......	4.58	.43	......	6.49	......	130.0
Mean	1,305	1.026	11.26	9.33	.70	.027	.19	.65	.82	.65	.06	.11	.93	35	18.6

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,673	350.49	....	20.08	41.83
Mean	239	50.07	79.05	2.87	5.98

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		111.31	Ether extract in food	1,112.18
Nitrogen in urine	78.85		Ether extract in feces	41.83
Nitrogen in feces	20.08			
		98.93		+1,070.35
		+12.38		

a Composite.

PERIOD NO. 6.—LOW PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.
	c. c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gm.	Gms.	Gm.	Gm.	Gms.		Gms.
Aug. 10	1,560	1.026	13.58	11.28	0.75	0.06	0.22	0.68	.....	0.77	0.08	.....	1.09	55	22.2
11	1,000	1.027	11.27	9.53	.66	.05	.18	.66	0.85	.70	.05	0.10	.93	40	14.0
12	1,510	1.023	12.88	10.83	.71	.03	.19	.66	.85	.69	.06	.10	1.09	30	15.9
13	1,220	1.027	12.32	10.29	.70	.05	.22	.71	.....	.66	.09	.....	1.11	40	17.0
14	1,680	1.029	11.83	10.01	.62	.08	.17	.70	.94	.71	.07	.16	1.01	40	13.8
15 [a]	1,015	1.025	9.96	8.17	.55	.....	.18	.65	.72	.52	.08	.12	.89	30	12.16
16 [a]	960	1.029	9.96	8.17	.55	.....	.18	.65	.72	.52	.08	.12	.89	30	12.16
Total	8,945	....	81.80	68.28	4.54	.....	1.34	4.71	....	4.57	.51	.....	7.01	.....	107.22
Mean	1,278	1.027	11.69	9.75	.65	.054	.19	.67	.82	.65	.07	.12	1.00	38	15.32

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,502	380.24	....	18.02	36.05
Mean	215	54.32	75.35	2.57	5.15

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		112.53	Ether extract in food	1,110.43
Nitrogen in urine	81.80		Ether extract in feces	36.05
Nitrogen in feces	18.02			
		99.82		+1,074.38
		+12.71		

[a] Composite.

Urine and feces chart.—Subject III (A. G.)—Continued.

PERIOD No. 7.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric-acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 17......	920	1.031	10.64	8.81	0.56	......	0.19	0.70	0.80	0.63	0.07	0.10	0.92	40	13.5
18......	1,205	1.029	12.67	10.58	.76	0.02	.20	.73	.91	.73	.07	.11	1.09	35	18.0
19......	1,520	1.026	13.02	....	.66	.05	.23	.66	.96	.71	.09	.16	1.07	30	19.4
20......	1,440	1.028	12.25	10.06	.65	.03	.23	.74	.93	.68	.09	.17	1.05	45	24.1
21......	1,460	1.026	12.39	10.22	.63	......	.21	.68	.86	.68	.08	.10	.91	40	21.5
22 [a]	1,700	1.021	12.90	10.62	.69	......	.20	.71	.83	.65	.07	.11	1.01	45	18.4
23 [a]	1,930	1.022	12.90	10.62	.69	......	.20	.71	.83	.65	.07	.11	1.01	45	18.4
Total...	10,175	....	86.77	....	4.64	......	1.46	4.93	6.12	4.73	.54	.86	7.06	......	133.3
Mean...	1,454	1.026	12.40	10.15	.66	.033	.21	.70	.87	.68	.08	.12	1.01	40	19.0

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period........	1,388	248.59	....	16.66	33.31
Mean..................	198	35.51	82.09	2.38	4.76

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food.......		117.38
Nitrogen in urine..	86.77	
Nitrogen in feces..	16.66	
		103.43
		+13.95

	Grams.
Ether extract in food .	1,154.55
Ether extract in feces .	33.31
	+ 1,121.24

[a] Composite.

PERIOD No. 8.– LOW PRESERVATIVE.

Date.	URINE.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 24	1,820	1.023	14.00	11.87	0.66	.....	0.23	0.68	1.00	0.80	0.09	0.11	1.13	35	21.2
25	1,580	1.024	14.28	12.06	.79	0.02	.21	.73	1.04	.85	.09	.10	1.02	45	18.7
26	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
27	1,400	1.025	12.64	10.72	.73	.02	.20	.70	.89	.67	.07	.15	.84	35	18.7
28	1,340	1.027	12.04	10.00	.61	.....	.22	.68	.85	.65	.09	.11	.95	35	20.1
29[a]	1,095	1.030	11.69	....	.62	.03	.19	.66	.82	.63	.08	.11	.95	40	18.7
30[a]	1,240	1.027	11.69	....	.62	.03	.19	.66	.82	.63	.08	.11	.95	40	18.7
31	1,070	1.030	10.99	....	.63	.04	.18	.72	.97	.67	.09	.21	1.02	45	18.0
Total	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Mean	1,364	1.026	12.48	11.16	.67	.028	.20	.69	.91	.70	.08	.13	.98	39	19.2

FECES.					
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,667	289.63	....	20.00	53.34
Mean	208	36.20	82.62	2.50	6.67

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	142.30	Ether extract in food	1,385.37
Nitrogen in urine 115.84		Ether extract in feces	53.34
Nitrogen in feces 20.00			
	135.84		+1,332.03
	+6.46		

[a] Composite.

Urine and feces chart.—Subject III (A. G.)—Continued.

PERIOD No. 9.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric-acid nitrogen.	Creatinine nitrogen.	Total surphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 1	1,140	1.029	12.74	....	0.62	.....	0.21	0.68	0.98	0.82	0.03	0.13	1.01	40	18.7
2	1,600	1.026	13.93	11.56	.68	.....	.27	.70	.91	.64	.09	.18	1.17	40	24.3
3	1,820	1.023	13.23	11.06	.67	.....	.22	.70	1.04	.76	.08	.20	1.09	40	25.0
4	1,100	1.029	11.34	9.04	.66	.....	.20	.66	.77	.60	.09	.08	.89	50	16.4
5 *a*	1,240	1.028	12.36	10.42	.54	0.03	.20	.70	.87	.67	.08	.12	1.00	45	18.2
6 *a*	1,565	1.027	12.36	10.42	.54	.03	.20	.70	.87	.67	.08	.12	1.00	45	18.2
7 *a*	1,060	1.029	12.36	10.42	.54	.03	.20	.70	.87	.67	.08	.12	1.00	45	18.2
Total	9,525	....	88.32	....	4.25	.....	1.50	4.84	6.31	4.83	.53	.95	7.16	......	139.0
Mean	1,361	1.027	12.62	10.49	.61	.03	.21	.69	.90	.69	.08	.14	1.02	44	19.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Grams.*	*Gms.*
Total for period	1,506	286.22	....	19.58	34.64
Mean	215	40.89	81.26	2.80	4.95

BALANCES FOR PERIOD.

	Grams.	
Nitrogen in food	128.54	Ether extract in food . Omitted.
Nitrogen in urine. 88.32		Ether extract in feces . Omitted.
Nitrogen in feces. 19.58	107.90	
	+20.64	

a Composite.

PERIOD No. 10.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric-acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gm.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
Sept. 8	1,320	1.026	14.00	11.89	0.68	.....	0.23	0.66	0.91	0.70	0.07	0.14	1.10	45	15.2
9	990	1.026	11.41	9.45	.60	.....	.24	.66	.83	.57	.09	.17	1.00	30	13.3
10	1,000	1.031	10.92	9.25	.47	0.03	.22	.67	.83	.64	.05	.14	.91	35	17.0
11	1,180	1.029	12.53	10.38	.61	.....	.22	.75	1.00	.75	.09	.16	1.03	35	17.7
12[a]	1,040	1.031	11.85	9.90	.53	.07	.20	.73	.75	.54	.06	.15	.95	35	16.8
13[a]	1,040	1.031	11.85	9.90	.53	.07	.20	.73	.75	.54	.06	.15	.95	35	16.8
14	1,130	1.031	14.88	12.66	.68	.07	.23	.80	.97	.74	.10	.13	1.17	45	16.8
Total	7,700	....	87.44	73.43	4.10	.....	1.54	5.00	6.04	4.48	.52	1.04	7.11	......	113.6
Mean	1,100	1.029	12.49	10.49	.59	.06	.22	.71	.86	.64	.07	.15	1.01	37	16.2

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,736	274.81	....	19.10	36.46
Mean	248	39.26	84.17	2.84	5.21

BALANCES FOR PERIOD.

	Grams.		Grams.
Nitrogen in food	117.28	Ether extract in food	1,130.99
Nitrogen in urine 87.44		Ether extract in feces	36.46
Nitrogen in feces 19.10	106.54		+1,094.53
	+10.74		

[a] Composite.

Urine and feces chart.—Subject III (A. G.)—Continued.

PERIOD No. 11.—LOW PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric-acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 15	1,580	1.021	13.02	10.95	0.67	0.02	0.16	0.71	0.97	0.74	0.10	0.13	0.91	40	15.2
16	1,240	1.027	11.69	9.71	.65	.06	.18	.67	.89	.66	.09	.14	.95	35	17.6
17	1,480	1.024	12.74	10.52	.65	.04	.21	.75	.89	.65	.08	.16	1.09	45	19.8
18	1,320	1.024	11.34	9.17	.69	.03	.18	.72	.83	.63	.07	.13	1.04	50	16.3
19[a]	1,030	1.029	11.83	9.78	.62	.05	.20	.70	.81	.58	.10	.13	1.08	50	16.6
20[a]	1,400	1.023	11.83	9.78	.62	.05	.20	.70	.81	.58	.10	.13	1.08	50	16.6
21	1,430	1.029	12.46	10.47	.49	.05	.22	.70	.99	.77	.09	.13	1.01	50	23.8
Total	9,480	......	84.91	70.38	4.39	.30	1.35	4.95	6.19	4.61	.63	.95	7.16	......	125.9
Mean	1,354	1.025	12.13	10.05	.63	.043	.19	.71	.88	.66	.09	.14	1.02	46	18.0

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,816	298.55	....	38.14	39.95
Mean	259	42.65	83.56	5.45	5.71

BALANCES FOR PERIOD.

			Grams.		*Grams.*
Nitrogen in food			119.35	Ether extract in food	1,144.49
Nitrogen in urine	84.91			Ether extract in feces	39.95
Nitrogen in feces	38.14				
			123.05		+1,104.54
			−3.70		

[a] Composite.

PERIOD No. 12.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric-acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 22......	1,300	1.026	12.81	10.67	0.71	0.05	0.19	0.72	1.00	0.78	0.08	0.14	1.02	60	19.6
23......	1,560	1.027	13.37	11.09	.78	.02	.22	.68	1.03	.78	.09	.16	1.11	60	23.8
24......	1,510	1.026	12.04	9.61	.75	.04	.19	.70	.97	.74	.07	.16	1.00	60	23.1
25......	1,540	1.026	11.31	9.14	.72	.06	.19	.72	.98	.72	.10	.16	.82	60	23.6
26[a]....	1,280	1.029	11.06	9.05	.58	.07	.19	.69	.88	.63	.10	.15	.95	40	23.4
27[a]....	1,320	1.029	11.06	9.05	.58	.07	.19	.69	.88	.63	.10	.15	.95	40	23.4
28......	1,760	1.025	13.79	11.58	.71	.05	.23	.70	1.07	.84	.07	.16	1.06	35	23.8
Total ..	10,270	......	85.44	70.19	4.83	.36	1.40	4.90	6.81	5.12	.61	1.08	6.91	......	160.7
Mean ..	1,467	1.027	12.21	10.03	.69	.051	.20	.70	.97	.73	.09	.15	.99	51	23.0

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	1,400	228.90	....	16.80	25.20
Mean................	200	32.70	83.65	2.40	3.60

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food.......	121.89	Ether extract in food.	1,186.72
Nitrogen in urine. 85.44		Ether extract in feces.	25.20
Nitrogen in feces. 16.80	102.24		+1,161.52
	+19.65		

a Composite.

Urine and feces chart.—Subject III (A. G.)—Continued.

PERIOD No. 13.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.[b]
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 29......	1,750	1.021	11.80	9.92	0.69	0.04	0.19	0.63	1.08	0.84	0.08	0.16	0.92	35	18.2
30......	1,560	1.025	12.71	10.53	.63	.05	.23	.72	.92	.73	.08	.11	1.02	35	20.5
Oct. 1......	1,040	1.030	11.41	9.42	.66	.04	.19	.70	.94	.73	.07	.14	.89	35	15.2
2......	1,490	1.029	13.27	11.23	.67	.06	.21	.68	1.03	.79	.07	.17	.97	25	23.4
3[a]....	1,500	1.025	13.09	11.10	.70	.06	.19	.66	1.02	.77	.08	.17	1.04	35	20.1
4[a]....	1,800	1.023	13.09	11.10	.70	.06	.19	.66	1.02	.77	.08	.17	1.04	35	20.1
5......	1,290	1.027	10.92	8.97	.61	.04	.19	.70	.95	.72	.08	.15	.91	30	20.5
Total ..	10,430	....	86.29	72.27	4.66	.35	1.39	4.75	6.96	5.35	.54	1.07	6.79	......	138.0
Mean ..	1,490	1.026	12.33	10.32	.67	.05	.20	.68	.99	.76	.08	.15	.97	33	19.7

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	1,811	284.87	....	19.92	30.99
Mean..................	259	40.70	84.27	2.85	4.43

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food........		120.05	Ether extract in food.	1,182.48
Nitrogen in urine.	86.29		Ether extract in feces.	30.99
Nitrogen in feces..	19.92			+1,151.49
		106.21		
		+13.84		

[a] Composite.

PERIOD No. 14.—HIGH PRESERVATIVE

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.[b]
	c. c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
Oct. 6	1,420	1.027	11.90	9.79	0.64	.....	0.24	0.75	0.92	0.67	0.08	0.17	0.99	35	18.4
7	1,690	1.023	11.90	9.76	.66	0.04	.20	.75	.86	.65	.06	.15	.89	25	18.4
8[a]	1,310	1.025	9.10	7.41	.54	.08	.12	.60	.76	.55	.07	.14	.65	35	18.4
9[a]	1,330	1.029	15.89	13.17	.83	.10	.21	.88	1.33	1.03	.10	.20	1.15	35	18.4
10[a]	1,220	1.027	13.79	11.29	.65	.04	.22	.73	.98	.72	.08	.18	.87	35	18.4
11[a]	1,130	1.031	13.79	11.29	.65	.04	.22	.73	.98	.72	.08	.18	.87	35	18.4
12	1,180	1.031	12.46	10.36	.60	.03	.21	.75	.75	.53	.07	.15	.90	45	14.7
13	1,150	1.030	12.67	10.52	.68	.06	.15	.71	1.05	.82	.08	.15	.94	35	14.7
Total	10,430	....	101.50	83.59	5.25	.....	1.57	5.90	7.63	5.69	.62	1.32	7.62	......	139.8
Mean	1,304	1.028	12.69	10.45	.66	.049	.20	.74	.95	.71	.08	.17	.91	31	17.5

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,685	300.63	....	18.54	42.13
Mean	211	37.58	82.16	2.32	5.27

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		136.49	Ether extract in food	1,440.80
Nitrogen in urine	101.50		Ether extract in feces	42.13
Nitrogen in feces	18.54	120.04		+1,398.67
		+16.45		

[a] Chlorides done in composite.

Urine and feces chart.—Subject III (A. G.)—Continued.

PERIOD No. 15.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Oct. 14	1,180	1.019	13.37	11.04	0.79	.....	0.22	0.70	1.02	0.77	0.07	0.18	0.96	35	14.7
15	1,050	1.031	12.67	10.25	.71	.....	.26	.75	1.09	.83	.08	.18	.92	50	15.2
16	1,000	1.030	13.23	11.06	.63	.....	.24	.71	1.00	.76	.07	.17	.83	35	15.2
17 [a]	1,080	1.032	12.95	10.51	.75	0.03	.21	.70	.99	.75	.08	.16	1.00	45	15.2
18 [a]	1,180	1.029	12.95	10.51	.75	.03	.21	.70	.99	.75	.08	.16	1.00	45	15.2
19	1,150	1.028	11.45	9.01	.86	.03	.20	.73	.98	.74	.08	.16	.87	75	15.4
20	1,140	1.026	11.06	8.73	.76	.07	.18	.58	.85	.64	.05	.16	.78	50	15.4
21	1,020	1.027	11.48	9.53	.73	.07	.14	.76	.90	.67	.07	.16	.91	30	15.4
22	1,600	1.027	15.05	12.29	1.01	.04	.28	.76	1.20	.91	.11	.18	1.29	55	18.7
23	1,170	1.028	12.50	10.11	.74	.08	.18	.70	.99	.75	.08	.16	.83	55	18.7
Total	11,570	....	126.71	103.04	7.73	.....	2.12	7.09	10.01	7.57	.77	1.67	9.39	.....	159.1
Mean	1,157	1.028	12.67	10.30	.77	.05	.21	.71	1.00	.76	.08	.17	.94	48	15.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	2,713	320.78	....	24.42	78.68
Mean	271	32.08	84.94	2.44	7.87

BALANCES FOR PERIOD.

	Grams.
Nitrogen in food	168.37
Nitrogen in urine 126.71	
Nitrogen in feces 24.42	
	151.13
	+17.24

	Grams.
Ether extract in food	1,773.47
Ether extract in feces	78.68
	+1,694.79

[a] Composite.

PERIOD No. 16.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gm.		Gms.
Oct. 24 [a]	1,300	1.025	12.32	9.91	0.72	0.05	0.19	0.68	0.89	0.66	0.08	0.15	0.91	40	18.7
25 [a]	1,830	1.021	12.32	9.91	.72	.05	.19	.68	.89	.66	.08	.15	.91	40	18.7
26	1,570	1.022	11.76	9.87	.62	.02	.18	.65	.96	.72	.08	.16	.96	55	16.3
27	1,120	1.020	7.14	5.88	.39	.03	.12	.37	.55	.36	.05	.14	.50	30	16.3
28	1,420	1.020	11.03	9.07	.70	.03	.16	.68	.86	.63	.06	.17	.85	50	16.3
29	1,740	1.021	10.64	8.65	.72	.11	.17	.66	.84	.59	.08	.17	.80	35	16.3
30	1,660	1.028	13.72	11.07	.82	.02	.23	.85	1.13	.88	.08	.17	......	35	16.3
Total	10,640	......	78.93	64.36	4.69	.31	1.24	4.57	6.12	4.50	.51	1.11	......	......	178.9
Mean	1,520	1.022	11.28	9.19	.67	.045	.18	.65	.87	.64	.07	.16	.70	41	17.0

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,990	261.49	......	19.10	29.85
Mean	284	37.36	86.86	2.73	4.26

BALANCES FOR PERIOD.

	Grams.		Grams.
Nitrogen in food	98.10	Ether extract in food	1,223.05
Nitrogen in urine	78.93	Ether extract in feces	29.85
Nitrogen in feces	19.10		+1,193.20
	98.03		
	+0.07		

[a] Composite.

Urine and feces chart—Continued.

Subject IV (O. F. L.).

PERIOD No. 1—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
July 3	1,200	1.026	13.44	......	0.67	......	0.17	0.66	......	0.70	0.07	......	1.00	5	10.0
4[a]	1,190	1.029	8.89	......	.40	0.08	.10	.44	......	.53	......	......	1.00	5	10.0
5[a]	310	1.028	8.89	......	.40	.08	.10	.44	......	.53	......	......	1.00	5	10.0
6	835	1.041	12.46	......	.55	.06	.12	.60	......	.76	.14	......	1.00	5	10.0
7	810	1.028	8.37	......	.43	......	.11	.39	......	.47	.04	......	.66	5	10.2
8	855	1.028	10.01	......	.50	.02	.12	.50	......	.53	.04	......	.74	15	11.4
9	900	1.027	9.45	......	.43	......	.13	.55	......	.45	.05	......	.82	5	......
Total	6,100	......	71.51	......	3.38	......	.85	3.58	......	3.97	......	......	6.22	......	......
Mean	871	1.029	10.22	......	.48	.06	.12	.51	......	.57	.07	......	.88	6	10.27

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	764	154.56	......	9.17	21.39
Mean	109	22.08	79.77	1.31	3.06

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		111.93	Ether extract in food	1,077.33
Nitrogen in urine	71.51		Ether extract in feces	21.39
Nitrogen in feces	9.17			
		80.68		+1,055.94
		+31.25		

a Composite.

PERIOD No. 2.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gms.	Gms.		Gms.
July 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	620	1.032	10.78	9.22	0.44	0.09	0.12	0.60	.....	0.57	0.05	.....	1.14	5	6.55
14	990	1.028	15.05	12.93	.51	.14	.14	.72	.....	.91	.05	.....	1.22	5	10.5
15	1,060	1.023	12.95	10.97	.50	.02	.13	.63	.....	.62	.06	.....	1.12	5	5.3
16	1,100	1.024	14.56	12.33	.60	.05	.17	.76	.....	.89	.01	.....	.89	10	6.5
17	1,310	1.020	14.21	12.37	.65	.08	.16	.70	.....	.62	.04	.....	1.08	5	7.7
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mean	1,016	1.025	13.51	11.56	.54	.076	.14	.68	.....	.72	.05	.....	1.09	6	7.31

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,161	218.73	.....	16.25	18.58
Mean	145	27.34	81.16	2.03	2.32

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		a 61.53
Nitrogen in urine	67.55	
Nitrogen in feces	16.25	
		a 83.80
		−16.17

	Grams.
Ether extract in food	748.54
Ether extract in feces	18.58
	+729.96

a 5 days.

Urine and feces chart.—Subject IV (O. F. L.)—Continued.

PERIOD No. 3.—NO PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
July 18 [a]	1,500	1.018	10.64	8.81	0.50	.....	0.12	0.63	.....	0.53	0.05	......	0.78	5	9.3
19 [a]	1,160	1.020	10.64	8.81	.50	.....	.12	.63	.....	.53	.05	......	.78	5	9.3
20	1,000	1.020	8.05	6.51	.25	0.03	.09	.46	.....	......	......	......	.69	5	8.1
21 [a]	780	1.030	12.74	10.53	.46	.02	.15	.64	.....	.78	.04	......	.95	5	8.1
22 [a]	780	1.030	12.74	10.53	.46	.02	.15	.64	.....	.78	.04	......	.95	5	8.1
23	675	1.026	12.57	10.75	.51	.04	.12	.57	.....	.62	.05	......	.83	5	....
24	710	1.029	11.55	9.71	.50	.14	.14	.63	.....	.73	.04	......	.83	5	6.31
Total	6,605	......	78.93	65.65	3.18	.....	.89	4.20	.....	......	......	......	5.81	......	....
Mean	944	1.025	11.28	9.38	.45	.05	.13	.60	.....	.66	.05	......	.83	5	8.20

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	762	149.89	....	8.38	23.62
Mean	109	21.41	80.33	1.20	3.37

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		83.24	Ether extract in food	679.89
Nitrogen in urine	78.93			
Nitrogen in feces	8.38		Ether extract in feces	23.62
		87.31		+656.27
		−4.07		

[a] Composite

PERIOD No. 4.—LOW PRESERVATIVE.

Date.	URINE. Volume.	Specific gravity.[a]	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.		Gms.
July 25	900	1.021	11.20	9.42	0.52	.....	0.13	0.60	.....	0.57	0.05	.....	0.96	5	8.6
26 [b]	1,080	1.021	11.20	9.42	.52	.....	.13	.60	.....	.57	.05	.....	.96	5	8.6
27	1,090	1.017	9.52	8.08	.43	0.04	.10	.57	.....	.57	.03	.....	.91	5	11.2
28 [b]	730	1.018	9.27	8.08	.37	.04	.11	.50	.....	.50	.02	.....	.85	5	7.5
29 [b]	730	1.018	9.27	8.08	.37	.04	.11	.50	.....	.50	.02	.....	.85	5	7.5
30	810	1.019	10.57	8.96	.46	.04	.13	.64	.....	.60	.06	.....	.89	5	7.7
31	810	1.020	11.97	10.16	.47	.....	.19	.70	.....	.61	.03	.....	1.00	10	9.5
Aug. 1 [b]	870	1.020	11.20	9.60	.54	.02	.14	.58	.....	.63	.05	.....	.95	5	10.06
2 [b]	920	1.020	11.20	9.60	.54	.02	.14	.58	.....	.63	.05	.....	.95	5	10.06
Total	7,940	.....	95.40	81.40	4.22	.....	1.18	5.27	.....	5.18	.36	.....	8.32	.....	80.72
Mean	882		10.60	9.01	.47	.033	.13	.59		.58	.04		.92	6	8.97

FECES.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	863	239.57	....	10.36	19.85
Mean	96	26.62	72.24	1.15	2.20

BALANCES FOR PERIOD.

	Grams.		Grams.
Nitrogen in food	120.97	Ether extract in food	1,011.76
Nitrogen in urine 95.40			
Nitrogen in feces 10.36		Ether extract in feces	19.85
	105.76		+991.91
	+15.21		

[a] Specific gravity of total urine diluted with 500 c. c. H_2O.

[b] Composite.

Urine and feces chart.—Subject IV (O. F. L.)—Continued.

PERIOD No. 5.—LOW PRESERVATIVE.

Date.	URINE. Volume.	Specific gravity.[a]	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Aug. 3	960	1.022	13.09	10.94	0.67	.....	0.15	0.68	.....	0.69	0.05	.....	1.31	5	13.1
4	700	1.021	10.64	8.82	.53	.....	.12	.62	.....	.69	.05	.....	1.00	10	8.6
5	840	1.022	13.79	12.09	.58	.....	.17	.70	.....	.69	.05	.....	1.25	20	9.6
6	1,230	1.018	11.55	9.84	.63	.....	.15	.62	.....	.69	.05	.....	.96	15	10.3
7	1,180	1.017	10.78	9.17	.53	0.02	.14	.61	.....	.70	.06	.....	.77	5	11.2
8[b]	975	1.017	10.29	8.68	.57	.03	.13	.60	.....	.55	.04	.....	.91	5	9.5
9[b]	1,140	1.016	10.29	8.68	.57	.03	.13	.60	.....	.55	.04	.....	.91	5	9.5
Total	7,025	.....	80.43	68.22	4.08	.....	.99	4.43	.....	4.56	.34	.....	7.11	.....	71.8
Mean	1,004	.....	11.49	9.74	.58	.027	.14	.63	.....	.65	.05	.....	1.02	9	10.3

FECES.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	997	296.21	.....	10.97	34.90
Mean	142	42.32	70.29	1.57	4.99

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	104.18	Ether extract in food	981.26
Nitrogen in urine 80.43			
Nitrogen in feces 10.97	91.40	Ether extract in feces	34.90
	+12.78		+946.36

[a] Specific gravity of mixture of total urine with 500 c. c. H_2O.

[b] Composite.

PERIOD No. 6.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.[a]	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 10......	1,200	1.018	10.85	9.24	0.48	0.06	0.15	0.63	.....	0.58	0.06	......	1.04	10	14.0
11......	1,035	1.016	11.13	9.54	.51	.06	.14	.68	0.91	.77	.04	0.10	.97	10	10.5
12......	1,035	1.017	11.83	10.24	.53	.03	.13	.60	.....	.60	.06	......	1.06	5	6.7
13......	990	1.018	11.76	10.33	.56	.06	.14	.63	.73	.64	.05	.01	1.18	10	7.2
14......	700	1.015	11.62	10.06	.51	.09	.14	.68	.86	.67	.07	.12	1.01	5	5.1
15[b].....	750	1.018	10.64	9.26	.51	.04	.13	.61	.65	.53	.04	.08	.96	10	6.0
16[b].....	625	1.020	10.64	9.26	.51	.04	.13	.61	.65	.53	.04	.08	.96	10	6.0
Total ..	6,335	....	78.47	67.93	3.64	.38	.96	4.44	.....	4.32	.36	......	7.18	......	55.5
Mean ..	905	......	11.21	9.70	.52	.051	.11	.63	.76	.62	.05	.08	1.03	9	7.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total..................	1,089	257.88	....	11.98	33.76
Mean..................	156	36.84	76.32	1.71	4.82

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food.......		103.20	Ether extract in food..	1,030.54
Nitrogen in urine.	78.47			
Nitrogen in feces.	11.98		Ether extract in feces .	33.76
		90.45		+996.78
		+12.75		

[a] Specific gravity of total urine diluted with 500 c. c. H_2O.

[b] Composite.

Urine and feces chart.—Subject IV (O. F. L.)—Continued.

PERIOD No. 7.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total surphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 17......	880	1.021	12.46	10.64	0.55	......	0.16	0.69	0.85	0.73	0.04	0.08	1.07	10	11.2
18......	1,140	1.019	12.60	10.94	.60	0.02	.16	.63	.76	.64	.05	.07	1.18	10	12.4
19......	1,210	1.019	12.88	....	.73	.06	.16	.66	.87	.67	.05	.15	1.09	10	11.9
20......	1,600	1.017	12.67	10.93	.55	.03	.15	.66	.88	.70	.05	.13	1.08	10	14.0
21......	1,580	1.021	12.97	11.17	.52	......	.15	.66	......	.70	.06	......	1.05	10	14.9
22 *a*.....	805	1.030	12.46	10.47	.58	.02	.15	.66	.80	.63	.06	.11	1.04	15	9.3
23 *a*.....	1,360	1.022	12.46	10.47	.58	.02	.15	.66	.80	.63	.06	.11	1.04	15	9.3
Total...	8,665	...	88.50	.	4.11	..	1.08	4.62	...	4.70	.37	....	7.55	.....	83.0
Mean...	1,238	1.021	12.64	10.77	.59	.03	.16	.66	.83	.67	.05	.11	1.08	11	11.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Perct.*	*Gms.*	*Gms.*
Total for period........	823	191.92	....	11.52	35.39
Mean..................	118	27.42	76.68	1.65	5.06

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food.........	108.73	Ether extract in food.	1,110.39
Nitrogen in urine. 88.50		Ether extract in feces.	35.39
Nitrogen in feces.. 11.52			
	100.02		+1,075.00
	+8.71		

a Composite.

PERIOD No. 8.—LOW PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 24......	1,416	1.019	12.62	10.61	0.60	.....	0.16	0.63	0.87	0.72	0.07	0.08	0.91	10	10.2
25.....	1,200	1.022	12.85	10.85	.63	.....	.14	.63	.85	.67	.06	.12	1.03	15	8.1
26......	1,210	1.022	11.66	9.59	.62	0.04	.14	.61	.71	.55	.05	.11	1.03	10	10.0
27.....	1,750	1.020	11.90	10.25	.50	.02	.16	.66	.81	.61	.05	.15	.95	15	15.6
28.....	1,570	1.020	12.35	10.47	.49	.03	.15	.67	.82	.69	.05	.08	1.04	5	12.8
29[a]...	780	1.030	11.97	....	.53	.04	.13	.57	.89	.74	.04	.11	1.01	15	6.55
30[a]...	780	1.030	11.97	....	.53	.04	.13	.57	.89	.74	.04	.11	1.01	15	6.55
31......	755	1.031	12.88	.....	.65	.03	.15	.66	.87	.67	.05	.15	1.13	20	6.55
Total...	9,461	.....	98.20	...	4.55	.	1.16	5.00	6.71	5.39	.41	.93	8.11	..	76.35
Mean...	1,183	1.024	12.28	10.37	.57	.033	.15	.63	.84	.67	.05	.12	1.01	13	9.54

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	819	180.75	....	9.83	34.40
Mean................	102	22.59	77.93	1.23	4.30

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food......	121.24	Ether extract in food.	1,360.25
Nitrogen in urine 98.20		Ether extract in feces.	34.40
Nitrogen in feces. 9.83	108.03		+1,325.85
	+13.21		

[a] Composite.

Urine and feces chart.—Subject IV (O. F. L.)—Continued.

PERIOD No. 9.—LOW PRESERVATIVE.

Date.	URINE. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 1	1,020	1.027	12.32	......	0.62	0.02	0.16	0.63	0.79	0.68	0.04	0.07	1.04	15	11.9
2	1,140	1.025	12.43	10.52	.58	.03	.16	.65	.79	.62	.04	.13	1.05	15	11.7
3	1,250	1.023	13.09	11.25	.54	.03	.16	.72	.92	.74	.06	.12	1.00	20	10.9
4	920	1.028	12.18	10.28	.60	....	.15	.63	.73	.57	.07	.09	1.00	15	10.9
5 *a*	1,220	1.023	12.11	10.49	.50	....	.16	.66	.78	.62	.03	.13	.99	15	11.7
6 *a*	1,240	1.022	12.11	10.49	.50	....	.16	.66	.78	.62	.03	.13	.99	15	11.7
7 *a*	1,850	1.017	12.11	10.49	.50	....	.16	.66	.78	.62	.03	.13	.99	15	11.7
Total	8,640	.....	86.35	......	3.84	....	1.11	4.61	5.57	4.47	.30	.80	7.06	.....	80.5
Mean	1,234	1.024	12.34	10.59	.55	.026	.16	.66	.80	.64	.04	.11	1.01	16	11.5

FECES.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	916	204.18	....	11.91	31.14
Mean	131	29.17	77.71	1.70	4.45

BALANCES FOR PERIOD.

	Grams.		
Nitrogen in food	110.70	Ether extract in food.	Omitted.
Nitrogen in urine 86.35		Ether extract in feces.	Omitted.
Nitrogen in feces. 11.91			
	98.26		
	+12.44		

a Composite.

PERIOD No 10.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gm.	Gms.		Gms.
Sept. 8......	900	1.025	11.10	9.29	0.57	.....	0.12	0.60	0.76	0.66	0.04	0.06	0.91	10	6.5
9......	685	1.029	11.06	9.43	.48	0.04	.14	.60	.75	.59	.06	.10	.97	10	5.3
10......	1,140	1.021	13.58	11.97	.53	.05	.17	.63	.85	.69	.04	.12	1.07	15	7.0
11......	910	1.021	10.01	8.55	.45	.12	.14	.61	.78	.60	.04	.14	.79	15	5.8
12[a]...	500	1.034	11.20	9.57	.51	.05	.14	.63	.72	.57	.05	.10	.86	10	4.6
13[a]..	940	1.023	11.20	9.57	.51	.05	.14	.63	.72	.57	.05	.10	.86	10	4.6
14.....	1,330	1.018	11.24	9.71	.55	.06	.15	.70	.72	.59	.04	.09	.88	15	9.1
Total...	6,405	...	79.39	68.09	3.60	.	1.00	4.40	5.30	4.27	.32	.71	6.34	......	42.9
Mean...	915	1.024	11.34	9.73	.51	.045	.14	.63	.76	.61	.05	.10	.91	12	6.1

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period.......	557	123.99	....	7.24	21.17
Mean..................	80	17.71	77.74	1.03	3.02

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food........		93.58
Nitrogen in urine.	79.39	
Nitrogen in feces..	7.24	
		86.63
		+6.95

	Grams.
Ether extract in food..	922.51
Ether extract in feces..	21.17
	+901.34

[a] Composite.

Urine and feces chart.—Subject IV (O. F. L.)—Continued.

PERIOD No. 11.—LOW PRESERVATIVE

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 15	1,300	1.019	11.34	9.56	0.59	.....	0.15	0.68	0.72	0.59	0.04	0.09	0.97	15	8.4
16	2,040	1.015	10.01	8.53	.50	0.04	.14	.60	.63	.47	.03	.13	.89	15	12.6
17	1,180	1.020	10.19	8.76	.45	.02	.14	.63	.67	.59	.03	.05	.90	20	9.3
18	880	1.028	10.85	9.30	.50	.02	.16	.65	.77	.64	.05	.08	1.09	15	9.4
19[a]	940	1.024	11.41	9.99	.41	.04	.15	.60	.80	.60	.06	.14	1.04	15	7.4
20[a]	1,150	1.023	11.41	9.99	.41	.04	.15	.60	.80	.60	.06	.14	1.04	15	7.4
21	1,310	1.022	13.83	12.15	.56	.03	.17	.68	.93	.73	.06	.14	1.13	15	10.2
Total	8,800	. .	79.04	68.28	3.42	.	1.06	4.44	5.32	4.22	.33	.77	7.06	.....	64.7
Mean	1,257	1.022	11.29	9.75	.49	.031	.15	.64	.76	.60	.05	.11	1.01	16	9.2

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	515	133.56	....	7.21	13.91
Mean	74	19.08	74.59	1.03	1.99

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	97.88	Ether extract in food	929.32
Nitrogen in urine 79.04		Ether extract in feces	13.91
Nitrogen in feces 7.21	86.25		+915.41
	+11.63		

[a] Composite.

PERIOD No. 12. HIGH PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 22......	1,165	1.020	10.71	9.30	0.49	0.02	0.14	0.60	0.72	0.58	0.05	0.09	0.85	15	10.5
23......	1,070	1.024	12.39	11.14	.51	.02	.15	.57	.83	.68	.05	.10	1.02	15	9.3
24......	2,600	1.012	14.65	12.72	.67	.08	.14	.68	.90	.73	.08	.09	1.19	20	15.2
25......	1,580	1.020	11.55	9.83	.53	.03	.17	.62	.92	.74	.06	.12	1.10	10	23.8
26 *a*.....	950	1.026	12.46	10.72	.58	.04	.14	.65	.95	.76	.05	.14	.91	10	7.4
27 *a*.....	800	1.028	12.46	10.72	.58	.04	.14	.65	.95	.76	.05	.14	.91	10	7.4
28......	1,450	1.021	13.16	11.56	.61	.04	.16	.60	.87	.67	.06	.14	.95	15	12.1
Total...	9,615	....	87.38	75.99	3.97	.27	1.03	4.37	6.14	4.92	.40	.82	6.93		85.7
Mean...	1,374	1.022	12.48	10.85	.57	.039	.15	.62	.88	.70	.06	.12	.99	11	12.2

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	492	113.85	....	6.89	13.78
Mean..............	70	16.26	76.86	.98	1.97

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food.......	109.10	Ether extract in food..	813.38
Nitrogen in urine 87.38		Ether extract in feces..	13.78
Nitrogen in feces 6.89			
	91.27		+799.60
	+14.93		

a Composite.

Urine and feces chart.—Subject IV (O. F. L.)—Continued.

PERIOD No. 13.—HIGH PRESERVATIVE.

Date.	URINE.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 29	1,200	1.024	12.60	11.01	0.60	0.02	0.16	0.60	0.97	0.77	0.06	0.14	1.07	15	11.7
30	1,260	1.023	12.11	10.58	.52	.07	.14	.66	.87	.69	.06	.12	1.07	15	11.4
Oct. 1	1,140	1.024	12.32	10.50	.49	.03	.17	.63	.82	.65	.06	.11	1.08	15	8.2
2	1,130	1.023	10.08	8.63	.44	.02	.14	.58	.76	.56	.15	.05	.84	15	10.7
3 *a*	910	1.027	11.20	9.59	.53	.04	.14	.57	.82	.62	.06	.14	.91	15	9.36
4 *a*	920	1.025	11.20	9.59	.53	.04	.14	.57	.82	.62	.06	.14	.91	15	9.36
5	1,180	1.024	11.20	9.52	.48	......	.16	.63	.82	.62	.06	.14	.81	15	13.3
Total	7,740	....	80.71	69.42	3.59	.....	1.05	4.24	5.88	4.53	.51	.84	6.69	......	74.02
Mean	1,106	1.024	11.53	9.92	.51	.037	.15	.61	.84	.65	.07	.12	.96	15	10.57

	FECES.				
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	687	151.35	....	7.56	18.55
Mean	98	21.62	77.97	1.08	2.65

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		100.14	Ether extract in food	909.49
Nitrogen in urine	80.71		Ether extract in feces	18.55
Nitrogen in feces	7.56			+890.94
		88.27		
		+11.81		

a Composite

PERIOD No. 14.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		
Oct. 6	1,220	1.023	10.99	9.23	0.49	.....	0.12	0.60	0.76	0.58	0.04	0.14	0.89	15	b 9.5
7	1,070	1.024	10.92	9.40	.47	0.03	.12	.63	.77	.57	.04	.16	.94	10	b 9.5
8	1,350	1.022	12.18	10.38	.54	.09	.13	.71	.92	.70	.05	.17	.90	15	b 9.5
9	1,170	1.022	10.92	9.24	.53	.05	.12	.60	.79	.58	.04	.17	.88	10	b 9.5
10 a	640	1.031	10.57	8.72	.51	.04	.13	.63	.76	.53	.05	.18	.74	10	b 9.5
11 a	680	1.033	10.57	8.72	.51	.04	.13	.63	.76	.53	.05	.18	.74	10	b 9.5
12	1,280	1.024	11.55	9.56	.65	.12	.16	.66	.85	.58	.08	.19	.78	20	b 10.9
13	1,540	1.020	9.42	7.59	.49	.05	.12	.64	.70	.50	.05	.15	.72	15	b 10.9
Total	8,950	.....	87.12	72.84	4.19	.....	1.03	5.10	6.31	4.57	.40	1.34	6.59	.....	b 78.8
Mean	1,119	1.025	10.89	9.11	.52	.046	.13	.64	.79	.57	.05	.17	.82	13	b 9.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	874	176.90	.....	8.74	22.72
Mean	109	22.11	79.76	1.09	2.84

BALANCES FOR PERIOD.

			Grams.		*Grams.*
Nitrogen in food		107.13		Ether extract in food.	1,348.43
Nitrogen in urine.	87.12			Ether extract in feces.	22.72
Nitrogen in feces.	8.74				
		95.86			+1,325.71
		+11.27			

a Composite.

b Chlorides done in composite.

Urine and feces chart.—Subject IV (O. F. L.)—Continued.

PERIOD No. 15.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Oct. 14	1,000	1.023	9.94	8.13	0.47	0.04	0.13	0.66	0.77	0.57	0.06	0.14	0.81	15	10.9
15	1,760	1.016	10.40	8.70	.51	.02	.14	.68	.76	.56	.04	.16	.82	15	7.0
16	850	1.022	8.58	7.13	.40	.04	.10	.57	.66	.46	.06	.14	.72	20	7.0
17 *a*	840	1.028	9.87	8.38	.40	.03	.14	.63	.77	.57	.05	.15	.82	10	7.0
18 *a*	645	1.028	9.87	8.38	.40	.03	.14	.63	.77	.57	.05	.15	.82	10	7.0
19 *a*	560	1.028	10.63	8.75	.61	.05	.14	.59	.75	.56	.06	.13	.81	15	11.7
20 *a*	1,920	1.022	10.63	8.75	.61	.05	.14	.59	.75	.56	.06	.13	.81	15	11.7
21 *a*	200	1.027	8.81	7.08	.52	.05	.13	.64	.73	.54	.06	.13	.77	20	13.8
22 *a*	1,265	1.024	8.81	7.08	.52	.05	.13	.64	.73	.54	.06	.13	.77	20	13.8
23 *a*	1,510	1.022	8.81	7.08	.52	.05	.13	.64	.73	.54	.06	.13	.77	20	13.8
Total	10,550	......	96.35	79.46	4.96	.41	1.32	6.27	7.42	5.47	.56	1.39	7.92	......	103.7
Mean	1,055	1.024	9.64	7.95	.50	.041	.13	.63	.74	.55	.06	.14	.79	16	10.37

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	993	235.54	....	9.93	34.76
Mean	99	23.55	76.28	.99	3.48

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		136.57	Ether extract in food	1,858.95
Nitrogen in urine	96.35		Ether extract in feces	34.76
Nitrogen in feces	9.93	106.28		+1,824.19
		+30.29		

a Composite.

PERIOD No. 16.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*		*Gms.*
Oct. 24 *a*	1,730	1.016	10.08	8.45	0.41	0.02	0.14	0.58	0.78	0.58	0.04	0.16	0.91	10	13.8
25 *a*	1,080	1.029	10.08	8.45	.41	.02	.14	.58	.78	.58	.04	.16	.91	10	13.8
26	1,000	1.020	8.82	7.66	.38	.04	.10	.51	.64	.46	.04	.14	.80	10	8.2
27	1,540	1.019	10.22	8.42	.47	.05	.14	.64	.77	.55	.06	.16	.88	15	8.2
28	1,050	1.019	9.45	7.86	.51	.04	.13	.60	.63	.45	.06	.12	.88	10	8.2
29	1,540	1.018	9.66	8.11	.49	.08	.13	.57	.77	.54	.05	.18	.88	10	8.2
30	1,420	1.024	11.20	9.13	.59	.02	.19	.73	.91	.66	.06	.19	......	15	8.2
Total	9,360	......	69.51	58.08	3.26	.27	.97	4.21	5.28	3.82	.35	1.11	......	......	68.6
Mean	1,337	1.021	9.93	8.30	.47	.04	.14	.60	.75	.55	.05	.16	.88	11	9.8

FECES.

	Moist weight	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,003	231.09	....	10.03	22.07
Mean	143	33.01	76.96	1.43	3.15

BALANCES FOR PERIOD.

		Grams.		*Grams*
Nitrogen in food		77.24	Ether extract in food	1,214.61
Nitrogen in urine	69.51		Ether extract in feces	22.07
Nitrogen in feces	10.03			
		— 79.54		+ 1,192.54
		— 2.30		

a Composite.

Urine and feces chart—Continued.

Subject V (A. M. N.).

PERIOD No. 1.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
July 3	1,675	1.023	12.74	....	0.58	0.06	0.22	0.66	.....	0.61	0.09	......	1.02	40	18.4
4[a]	1,670	1.021	12.39	....	.53	.06	.22	.61	.....	.66	.06	......	1.02	15	18.4
5[a]	1,100	1.026	12.39	....	.53	.06	.22	.61	.....	.66	.06	......	1.02	15	18.4
6	1,010	1.030	12.39	....	.58	.06	.22	.68	.....	.77	.04	......	1.02	20	18.4
7	1,170	1.030	12.95	....	.67	.08	.24	.70	.....	.73	.07	......	.85	20	18.9
8	1,450	1.023	11.34	....	.54	.06	.22	.68	.....	.65	.04	......	.83	25	18.4
9	1,390	1.027	12.25	....	.54	.05	.23	.74	.....	.72	.05	......	.99	30	....
Total	9,465	....	86.45	....	3.97	.43	1.57	4.68	.....	4.80	.41	......	6.75	......	....
Mean	1,352	1.025	12.35	....	.57	.062	.22	.67	.....	.69	.06	......	.96	24	18.5

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,652	234.42	....	16.52	26.43
Mean	236	33.49	85.81	2.36	3.78

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		108.82	Ether extract in food	885.70
Nitrogen in urine	86.45		Ether extract in feces	26.43
Nitrogen in feces	16.52			
		102.97		+859.27
		+5.85		

[a] Composite.

PERIOD No. 2.—NO PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
July 10	1,350	1.030	12.04	9.72	0.50	0.09	0.26	0.66	.....	0.69	0.07	......	0.81	35	23.6
11 *a*	1,130	1.030	12.04	9.42	.58	.07	.23	.68	.....	.65	.08	......	.84	35	16.7
12 *a*	780	1.031	12.04	9.42	.58	.07	.23	.68	.....	.65	.08	......	.84	35	16.7
13	670	1.034	11.13	8.92	.60	.07	.21	.66	.....	.55	.05	......	.74	20	9.8
14	1,090	1.025	11.27	9.33	.38	.....	.19	.66	.....	.62	.08	......	.82	25	11.9
15	890	1.030	11.48	9.24	.56	.08	.21	.65	.....	.63	.06	......	.91	20	12.2
16	890	1.029	10.73	8.72	.51	.09	.20	.68	.....	.64	.06	......	.78	20	12.4
17	730	1.031	10.22	8.48	.47	.10	.19	.73	.....	.48	.06	......	.68	30	10.0
Total	7,530	....	90.95	73.25	4.18	.....	1.72	5.40	.....	4.91	.54	......	6.42	......	113.3
Mean	941	1.030	11.37	9.16	.52	.081	.22	.69	.....	.61	.07	......	.80	28	14.2

a Composite.

	Feces.				
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,599	226.90	....	18.37	23.99
Mean	200	28.36	85.81	2.30	3.00

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		109.47	Ether extract in food	812.11
Nitrogen in urine	90.95		Ether extract in feces	23.99
Nitrogen in feces	18.37			
		109.32		+788.12
		+0.15		

Urine and feces chart.—Subject V (A. M. N.)—Continued.

PERIOD No. 3.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
July 18 [a]	930	1.030	10.57	8.60	0.61	0.02	0.21	0.70	.....	0.58	0.04	......	0.59	40	13.3
19 [a]	840	1.029	10.57	8.60	.61	.02	.21	.70	.....	.58	.04	......	.59	40	13.3
20	1,100	1.028	11.69	9.46	.66	.04	.22	.70	.....	.58	.06	......	.82	60	17.3
21	940	1.029	10.36	8.40	.46	.03	.23	.66	.....	.70	.07	......	.75	20	14.9
22	960	1.030	9.80	7.51	.51	.06	.19	.66	.....	.65	.06	......	.61	25	14.0
23	1,210	1.023	9.26	7.38	.46	.09	.21	.70	.....	.46	.07	......	.67	20	16.8
24	860	1.029	8.61	6.56	.44	.07	.20	.63	.....	.54	.07	......	.65	10	12.8
Total	6,840	......	70.86	56.51	3.75	.33	1.47	4.75	.....	4.09	.41	......	4.68	......	102.4
Mean	977	1.028	10.12	8.07	.54	.047	.21	.68	.....	.58	.06	......	.67	31	14.6

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,820	239.15	....	16.93	38.22
Mean	260	34.16	86.86	2.42	5.46

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		94.07	Ether extract in food	767.16
Nitrogen in urine	70.86		Ether extract in feces	38.22
Nitrogen in feces	16.93			
		87.79		+728.94
		+6.28		

[a] Composite.

PERIOD No. 4.—LOW PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gms.	Gm.		Gms.
July 25 [a]	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
26 [a]	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
27	800	1.031	10.57	8.55	0.47	0.05	0.20	0.62	.....	0.53	0.08	......	0.81	30	12.1
28	1,020	1.031	11.62	9.94	.49	.....	.23	.71	.....	.60	.09	......	.92	20	15.6
29	1,040	1.027	9.03	7.51	.40	.08	.19	.65	.....	.47	.05	......	.71	30	13.8
30	820	1.031	9.45	7.55	.42	.10	.20	.72	.....	.54	.05	......	.79	20	12.6
31	1,040	1.027	9.05	7.54	.35	.03	.21	.70	.....	.46	.03	......	.70	30	14.2
Aug. 1 [a]	870	1.032	9.24	7.54	.43	.04	.21	.59	.....	.52	.07	......	.78	20	12.4
2 [a]	800	1.031	9.24	7.54	.43	.04	.21	.59	.....	.52	.07	......	.78	20	12.4
Total	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Mean	913	1.030	9.74	8.02	.43	.057	.21	.65	.....	.52	.06	...	.78	24	13.3

	Feces.				
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total period	1,377	249.47	....	17.90	26.16
Mean	153	27.72	81.89	1.99	2.91

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		104.70	Ether extract in food	791.53
Nitrogen in urine	87.68		Ether extract in feces	26.16
Nitrogen in feces	17.90			
		105.58		+765.37
		−0.88		

[a] Composite.

Urine and feces chart.—Subject V (A. M. N.)—Continued.

PERIOD No. 5.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 3	780	1.035	9.17	7.26	0.50	.....	0.19	0.63	0.68	0.46	0.06	0.16	0.78	25	13.8
4	800	1.031	9.03	7.22	.41	.....	.20	.63	.68	.46	.06	.16	.75	20	14.2
5	840	1.032	9.59	7.83	.42	.02	.21	.71	.68	.46	.06	.16	.78	25	13.8
6	840	1.030	8.89	7.01	.55	.05	.17	.63	.68	.46	.06	.16	.73	30	7.9
7	1,470	1.020	8.05	6.32	.51	.06	.19	.62	.....	.44	.06	......	.65	10	15.2
8[a]	1,000	1.030	9.10	7.11	.55	.06	.19	.63	.....	.49	.05	......	.69	35	14.9
9[a]	1,790	1.016	9.10	7.11	.55	.06	.19	.63	.....	.49	.05	......	.69	35	14.9
Total	7.520	....	62.93	49.86	3.49	.....	1.34	4.48	.....	3.26	.40	......	5.07	......	94.7
Mean	1,074	1.028	8.99	7.12	.50	.050	.19	.64	.68	.47	.06	.16	.72	26	13.5

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,434	239.05	....	17.21	30.11
Mean	205	34.15	83.33	2.46	4.30

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		97.71
Nitrogen in urine	62.93	
Nitrogen in feces	17.21	
		80.14
		+17.57

	Grams.
Ether extract in food	780.43
Ether extract in feces	30.11
	+750.32

[a] Composite.

PERIOD No 6. LOW PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		
Aug. 10......	1,270	1.026	10.64	9.03	0.49	0.09	0.22	0.68	.....	0.57	0.05	.....	0.86	35	18.9
11......	640	1.030	8.96	7.22	.54	.11	.16	.68	0.74	.60	.04	0.10	.54	40	7.9
12......	670	1.033	11.62	9.77	.59	.08	.20	.64	.74	.62	.06	.06	.67	40	7.7
13......	1,020	1.028	11.41	9.58	.47	.10	.20	.66	.60	.48	.07	.05	.88	25	12.6
14......	900	1.027	9.94	8.17	.51	.11	.20	.68	.76	.58	.06	.12	.67	35	10.2
15[a].....	800	1.030	9.52	7.89	.44	.02	.20	.66	.65	.47	.05	.13	.79	30	12.6
16[a].....	940	1.030	9.52	7.89	.44	.02	.20	.66	.65	.47	.05	.13	.79	30	12.6
Total...	6,240	......	71.61	59.55	3.48	.53	1.38	4.66	.....	3.79	.38	.....	5.20	......	82.5
Mean..	891	1.029	10.23	8.51	.50	.076	.20	.67	.69	.54	.05	.10	.74	34	11.8

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	1,575	295.79	....	17.90	34.65
Mean................	225	42.26	81.22	2.56	4.95

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food.......	94.04	Ether extract in food..	772.52
Nitrogen in urine. 71.61		Ether extract in feces..	34.65
Nitrogen in feces. 17.90			
	89.51		+737.87
	+4.53		

[a] Composite.

Urine and feces chart.—Subject V (A. M. N.)—Continued.

PERIOD No. 7.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms*	*Gm.*	*Gms*	*Gms*	*Gms*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 17	940	1.028	9.52	7.70	0.56	.....	0.18	0.68	0.62	0.47	0.07	0.08	0.67	35	13.1
18	915	1.028	9.38	7.59	.53	0.03	.17	.61	.62	.44	.09	.09	.67	45	14.0
19	1,340	1.024	11.06	....	.52	.....	.24	.67	.82	.57	.08	.17	.80	35	14.7
20	980	1.030	10.64	8.78	.46	.06	.25	.68	.79	.59	.06	.14	.87	40	14.0
21	1,160	1.028	12.32	9.92	.57	.02	.26	.75	.87	.64	.07	.16	.78	45	16.8
22 [a]	700	1.035	10.64	8.53	.63	.05	.21	.66	.67	.49	.07	.11	.67	45	11.7
23	900	1.029	10.64	8.53	.63	.05	.21	.66	.67	.49	.07	.11	.67	45	11.7
Total	6,935	....	74.20	....	3.90	.....	1.52	4.71	5.06	3.69	.51	.86	5.13	......	96.0
Mean	991	1.029	10.60	8.51	.56	.04	.22	.67	.72	.53	.07	.12	.73	41	13.7

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,774	241.44	....	19.51	35.48
Mean	253	34.49	86.39	2.79	5.07

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		103.32
Nitrogen in urine	74.20	
Nitrogen in feces	19.51	
		93.71
		+9.61

	Grams.
Ether extract in food	816.25
Ether extract in feces	35.48
	+780.77

[a] Composite.

PERIOD No. 8.—LOW PRESERVATIVE.

Date.	URINE.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms	Gm.	Gms	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
Aug. 24......	1,210	1.027	11.20	9.08	0.51	0.05	0.23	0.66	0.75	0.57	0.07	0.11	0.82	35	15.2
25......	1,150	1.029	10.85	8.83	.54	.02	.22	.66	.72	.55	.07	.10	.82	45	18.2
26......	1,200	1.026	10.78	8.76	.47	.07	.22	.66	.70	.48	.07	.15	.85	35	16.1
27......	1,025	1.030	10.36	8.41	.44	.06	.23	.68	.76	.56	.06	.14	.76	30	15.6
28......	860	1.030	10.08	8.01	.46	.04	.19	.66	.88	.50	.05	.33	.66	35	12.8
29 [a]......	800	1.033	10.50	....	.53	.06	.22	.66	.79	.57	.07	.15	.65	30	10.5
30 [a]......	640	1.033	10.50	....	.53	.06	.22	.66	.79	.57	.07	.15	.65	30	10.5
31......	800	1.033	10.71	....	.62	.07	.22	.75	.79	.57	.07	.15	.82	30	12.1
Total...	7,685	....	84.98	....	4.10	.43	1.75	5.39	6.18	4.37	.53	1.28	6.03	.....	111.0
Mean...	961	1.030	10.62	8.62	.51	.054	.22	.67	.77	.55	.07	.16	.75	34	13.9

FECES.					
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period.......	986	193.85	....	14.79	22.68
Mean................	123	24.23	80.34	1.85	2.84

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food........		118.20	Ether extract in food...	883.92
Nitrogen in urine.	84.98		Ether extract in feces..	22.68
Nitrogen in feces.	14.79			
		99.77		+861.24
		+18.43		

a Composite.

Urine and feces chart.—Subject V (A. M. N.)—Continued.

PERIOD No. 9.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 1	860	1.032	10.22	....	0.43	0.05	0.20	0.66	0.73	0.54	0.06	0.13	0.87	30	14.0
2	1,210	1.025	10.64	8.48	.59	.05	.22	.70	.83	.54	.05	.24	.90	35	16.6
3	910	1.031	11.20	8.98	.54	.02	.25	.72	.84	.61	.05	.18	1.00	40	13.8
4	940	1.030	10.85	8.62	.62	......	.21	.64	.68	.48	.07	.13	.82	40	14.7
5[a]	1,150	1.030	10.68	8.83	.45	.03	.22	.73	.75	.53	.07	.15	.82	30	17.0
6[a]	1,240	1.029	10.68	8.83	.45	.03	.22	.73	.75	.53	.07	.15	.82	30	17.0
7[a]	1,270	1.023	10.68	8.83	.45	.03	.22	.73	.75	.53	.07	.15	.82	30	17.0
Total	7,580	....	74.95	....	3.53	.....	1.54	4.91	5.33	3.76	.44	1.13	6.05	......	110.1
Mean	1,083	1.029	10.71	8.76	.50	.035	.22	.70	.76	.54	.06	.16	.86	34	15.7

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,526	243.55	....	19.84	30.52
Mean	218	34.79	84.04	2.83	4.36

BALANCES FOR PERIOD.

		Grams.	
Nitrogen in food		109.20	Ether extract in food. . Omitted.
Nitrogen in urine	74.95		Ether extract in feces. Omitted.
Nitrogen in feces	19.84		
		94.79	
		+14.41	

[a] Composite.

PERIOD No. 10.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms	Gm.	Gms.	Gms	Gms.	Gms.	Gm.	Gm.	Gms.		Gms.
Sept. 8	730	1.035	10.99	8.88	0.43	0.04	0.20	0.63	0.76	0.59	0.07	0.10	0.76	40	9.3
9	770	1.030	10.57	8.75	.41	.08	.19	.63	.71	.49	.07	.15	.75	30	9.3
10	1,100	1.029	10.22	8.46	.35	.09	.23	.64	.72	.52	.06	.14	.75	25	17.3
11	910	1.033	10.50	8.48	.47	.05	.19	.70	.83	.60	.09	.14	.87	30	14.7
12[a]	880	1.033	9.80	8.00	.45	.11	.20	.66	.50	.39	.08	.03	.75	25	12.8
13[a]	1,020	1.024	9.80	8.00	.45	.11	.20	.66	.50	.39	.08	.03	.75	25	12.8
14	780	1.033	10.12	8.18	.42	.12	.20	.73	.83	.63	.08	.12	.82	25	10.9
Total	6,190	....	72.00	58.75	2.98	.60	1.41	4.65	4.85	3.61	.53	.71	5.45	..	87.1
Mean	884	1.031	10.29	8.39	.42	.086	.20	.66	.69	.52	.08	.10	.78	29	12.4

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,156	195.94	......	13.87	27.74
Mean	165	27.99	83.05	1.98	3.96

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		97.53	Ether extract in food	838.33
Nitrogen in urine	72.00		Ether extract in feces	27.74
Nitrogen in feces	13.87			
		85.87		+810.59
		+11.66		

a Composite.

Urine and feces chart.—Subject V (A. M. N.)—Continued.

PERIOD No. 11.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms*	*Gm.*	*Gms.*	*Gms*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 15......	950	1.031	12.95	10.94	0.54	0.02	0.23	0.72	0.83	0.63	0.08	0.12	0.95	40	13.5
16......	960	1.030	11.69	9.84	.56	.09	.20	.65	.76	.56	.09	.11	.95	50	14.5
17......	1,220	1.027	10.57	8.65	.45	.04	.19	.66	.66	.52	.05	.09	.90	30	17.5
18......	1,080	1.028	11.17	9.36	.51	.07	.19	.69	.86	.65	.08	.13	.93	35	14.0
19 *a*.....	1,030	1.033	11.90	9.86	.40	.10	.21	.68	.75	.55	.09	.11	.82	25	14.9
20 *a*.....	1,130	1.027	11.90	9.86	.40	.10	.21	.68	.75	.55	.09	.11	.82	25	14.9
21......	930	1.031	9.94	8.02	.44	.09	.18	.66	.72	.45	.10	.17	.81	25	14.9
Total...	7,300	......	80.12	66.53	3.30	.51	1.41	4.74	5.33	3.91	.58	.84	6.18	......	104.2
Mean...	1,043	1.030	11.45	9.50	.47	.073	.20	.68	.76	.56	.08	.12	.88	33	14.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	1,154	221.80	......	15.00	26.54
Mean.................	165	31.7	80.78	2.14	3.78

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food.......		104.85
Nitrogen in urine.	80.12	
Nitrogen in feces.	15.00	
		95.12
		+9.73

	Grams.
Ether extract in food...	856.00
Ether extract in feces..	26.54
	829.46

a Composite.

PERIOD No. 12.—HIGH PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 22......	980	1.030	10.01	7.86	0.44	0.10	0.21	0.75	0.78	0.50	0.10	0.18	0.63	25	15.9
23......	890	1.031	11.41	9.38	.60	.08	.23	.66	.85	.62	.10	.13	.87	35	13.3
24......	1,410	1.0[illegible]6	12.25	10.03	.46	.07	.26	.68	.82	.59	.07	.16	1.00	35	22.2
25......	1,340	1.029	10.22	8.20	.47	.09	.19	.65	.91	.67	.08	.16	.76	35	24.5
26[a]......	900	1.033	11.83	9.77	.49	.12	.20	.70	.92	.65	.08	.19	.80	30	16.7
27[a]......	1,110	1.030	11.83	9.77	.49	.12	.20	.70	.92	.65	.08	.19	.80	30	16.7
28......	1,640	1.027	13.72	11.60	.54	.07	.24	.63	1.06	.77	.09	.20	.96	40	23.8
Total...	8,270	......	81.27	66.61	3.49	.65	1.[illegible]3	4.77	6.26	4.45	.60	1.21	5.82	....	133.1
Mean...	1,181	1.029	11.61	9.51	.50	.094	.22	.6[illegible]	.89	.64	.09	.17	.83	33	19.0

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period......	1,028	169.52		11.31	15.39
Mean......	147	24.22	83.51	1.62	2.20

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food......		100.61	Ether extract in food...	706.57
Nitrogen in urine.	81.27		Ether extract in feces...	15.39
Nitrogen in feces.	11.31			
		92.58		+691.18
		+8.03		

[a] Composite.

Urine and feces chart.—Subject V (A. M. N.)—Continued.

PERIOD No. 13.—HIGH PRESERVATIVE.

Date.	URINE. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total surphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 29	1,600	1.022	11.76	9.72	0.61	0.06	0.20	0.63	1.02	0.76	0.08	0.18	0.96	35	16.8
30	1,150	1.031	12.18	10.15	.53	.11	.22	.71	.96	.70	.09	.17	.92	35	17.5
Oct. 1	1,100	1.030	12.85	10.81	.60	.09	.21	.68	.89	.72	.07	.10	.92	30	15.2
2	1,510	1.028	13.79	11.86	.52	.07	.23	.66	1.15	.83	.07	.25	1.05	35	21.0
3[a]	1,130	1.030	12.32	10.26	.59	.07	.21	.68	.86	.63	.07	.16	1.04	30	15.2
4[a]	1,340	1.028	12.32	10.26	.59	.07	.21	.68	.86	.63	.07	.16	1.04	30	15.2
5	1,510	1.026	13.44	11.13	.55	.07	.20	.73	1.02	.77	.06	.19	.95	45	21.9
Total	9,340	......	88.66	74.19	3.99	.54	1.48	4.77	6.76	5.04	.51	1.21	6.88	......	122.8
Mean	1,334	1.028	12.67	10.60	.57	.077	.21	.68	.97	.72	.07	.17	.98	34	17.5

FECES.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,510	268.78	....	16.61	40.77
Mean	216	38.40	82.20	2.37	5.83

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	118.99	Ether extract in food	929.36
Nitrogen in urine. 88.66		Ether extract in feces	40.77
Nitrogen in feces. 16.61	105.27		+888.59
	+13.72		

[a] Composite.

PERIOD No. 14.—HIGH PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
Oct. 6	1,100	1.029	10.64	8.71	0.52	0.02	0.18	0.68	0.82	0.59	0.08	0.15	0.82	35	[b] 14.0
7	1,090	1.031	11.62	9.58	.43	.08	.20	.72	.82	.58	.06	.18	.97	30	[b] 14.0
8	1,430	1.026	13.23	10.86	.62	.....	.23	.80	.98	.72	.09	.17	.95	45	[b] 14.0
9	880	1.032	12.18	9.96	.61	.10	.19	.71	.93	.67	.07	.19	.82	35	[b] 14.0
10 [a]	1,140	1.030	12.78	10.53	.53	.10	.21	.68	.86	.62	.07	.17	.87	35	[b] 14.0
11 [a]	1,040	1.029	12.78	10.53	.53	.10	.21	.68	.86	.62	.07	.17	.87	35	[b] 14.0
12	1,160	1.029	11.90	9.82	.65	.08	.21	.68	.85	.58	.08	.19	.74	35	[b] 13.3
13	1,400	1.024	11.83	9.70	.65	.10	.18	.71	.89	.66	.07	.16	.78	45	[b] 13.3
Total	9,240	.....	96.96	79.69	4.54	.....	1.61	5.66	7.01	5.04	.59	1.38	6.82	.....	[b] 110.6
Mean	1,155	1.029	12.12	9.96	.57	.083	.20	.71	.88	.63	.07	.17	.85	37	[b] 13.8

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,784	293.65	....	21.41	32.21
Mean	223	36.71	83.54	2.68	4.03

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		115.22	Ether extract in food	951.90
Nitrogen in urine	96.96		Ether extract in feces	32.21
Nitrogen in feces	21.41	118.37		+919.69
		−3.15		

[a] Composite.

[b] Chlorides done in composite.

Urine and feces chart.—Subject V (A. M. N.)—Continued.

PERIOD No. 15.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Oct. 14	820	1.023	10.50	8.42	0.54	0.08	0.18	0.70	0.83	0.59	0.06	0.18	0.79	35	13.3
15	1,010	1.030	10.54	8.51	.42	.06	.22	.75	.77	.54	.08	.15	.85	35	12.1
16	800	1.033	9.31	7.58	.47	.06	.17	.65	.64	.50	.06	.08	.70	30	12.1
17 [a]	980	1.032	10.61	8.80	.51	.02	.26	.69	.87	.62	.08	.17	.77	30	12.1
18 [a]	740	1.034	10.61	8.80	.51	.02	.26	.69	.87	.62	.08	.17	.77	30	12.1
19	800	1.033	11.62	9.38	.70	.04	.23	.68	.90	.62	.07	.21	.77	35	13.1
20	1,140	1.026	11.13	8.88	.68	.....	.18	.70	.75	.53	.08	.14	.85	40	13.1
21	1,040	1.030	9.56	7.66	.38	.....	.20	.67	.73	.50	.08	.15	.82	35	13.1
22	1,000	1.030	9.10	7.30	.40	.07	.19	.67	.77	.52	.08	.17	.76	30	14.2
23	780	1.033	9.73	7.55	.54	.10	.16	.68	.80	.57	.07	.16	.76	40	14.2
Total	9,110	....	102.71	82.88	5.15	.....	2.05	6.88	7.93	5.61	.74	1.58	7.84	.....	129.4
Mean	911	1.030	10.27	8.29	.52	.056	.21	.69	.79	.56	.07	.16	.78	34	12.94

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	2,151	281.78	....	17.21	32.27
Mean	215	28.18	86.90	1.72	3.23

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	134.57	Ether extract in food	1,239.55
Nitrogen in urine	102.71	Ether extract in feces	32.27
Nitrogen in feces	17.21		
	119.92		+1,207.28
	+14.65		

[a] Composite.

PERIOD No. 16.—NO PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gm.		Gms.
Oct. 24 a	1,120	1.030	10.15	8.27	0.41	0.11	0.21	0.69	0.76	0.52	0.06	0.18	0.82	35	14.2
25 a	1,700	1.021	10.15	8.27	.41	.11	.21	.69	.76	.52	.06	.18	.82	35	14.2
26	1,000	1.032	9.80	7.97	.42	.08	.19	.64	.86	.58	.07	.21	.80	35	14.2
27	1,160	1.028	10.01	8.15	.49	.08	.18	.61	.75	.50	.07	.18	.77	35	14.2
28	1,300	1.025	9.14	7.27	.49	.08	.18	.68	.72	.48	.07	.17	.85	40	14.2
29	1,080	1.027	8.05	6.37	.39	.....	.15	.57	.63	.36	.09	.18	.74	30	14.2
30	1,000	1.030	9.03	7.26	.43	.06	.17	.66	.74	.50	.07	.17	......	25	14.2
Total	8,360	....	66.33	53.56	3.04	.....	1.29	4.54	5.22	3.46	.49	1.27	......	......	99.4
Mean	1,194	1.028	9.48	7.65	.43	.087	.18	.65	.75	.49	.07	.18	.80	34	14.2

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,042	232.89	....	14.59	18.76
Mean	149	33.27	77.65	2.08	2.68

BALANCES FOR PERIOD.

	Grams.		Grams.
Nitrogen in food	80.31	Ether extract in food	796.14
Nitrogen in urine 66.33		Ether extract in feces	18.76
Nitrogen in feces 14.59	80.92		+777.38
	−0.61		

a Composite.

Urine and feces chart—Continued.

Subject VI (C. H. S.).

PERIOD No. 1.—NO PRESERVATIVE.

Date.	URINE.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
July 3	1,320	1.030	13.06	......	0.58	0.05	0.23	0.63	.....	0.62	0.15	......	0.95	15	21.2
4[a]	1,270	1.030	11.87	......	.59	.08	.20	.56	.....	.62	.10	......	.95	40	21.2
5[a]	1,180	1.030	11.87	......	.59	.08	.20	.56	.....	.62	.10	......	.95	40	21.2
6	1,070	1.032	13.52	......	.57	.08	.20	.65	.....	.80	.06	......	.95	15	21.2
7	1,640	1.026	14.56	......	.70	.07	.24	.64	.....	.83	.09	......	.89	10	26.2
8	1,100	1.029	11.58	......	.60	.07	.21	.53	.....	.72	.05	......	.68	25	18.0
9	1,105	1.030	12.60	......	.65	.11	.21	.52	.....	.72	.08	......	.69	30	....
Total	8,685	......	89.06	......	4.28	.54	1.49	4.09	.....	4.93	.63	......	6.06	......	....
Mean	1,241	1.030	12.72	......	.61	.077	.21	.58	.....	.70	.09	......	.87	25	21.5

FECES.					
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,227	228.96	....	15.95	40.49
Mean	175	32.71	81.34	2.28	5.78

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		117.92
Nitrogen in urine	89.06	
Nitrogen in feces	15.95	
		105.01
		+12.91

	Grams.
Ether extract in food	1,033.95
Ether extract in feces	40.49
	+993.46

[a] Composite.

PERIOD No. 2.—NO PRESERVATIVE.

Date.	URINE.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
July 10	840	1.031	10.22	8.08	0.60	0.08	0.20	0.55	.....	0.58	0.08	.....	0.68	20	14.0
11 [a]	1,100	1.031	12.53	10.11	.60	.06	.23	.61	.....	.72	.07	.....	.69	20	17.3
12 [a]	880	1.032	12.53	10.11	.60	.06	.23	.61	.....	.72	.07	.....	.69	20	17.3
13	690	1.034	10.31	8.23	.59	.06	.21	.69	.....	.49	.04	.....	.75	15	11.7
14	1,070	1.027	11.36	9.41	.59	.05	.21	.63	.....	.62	.06	.....	.81	15	15.2
15	920	1.032	10.29	8.78	.51	.07	.21	.60	.....	.63	.04	.....	.92	10	11.2
16	850	1.032	11.41	9.42	.57	.09	.20	.63	.....	.71	.04	.....	.88	15	14.0
17	1,120	1.027	12.88	10.98	.50	.09	.23	.75	.....	.59	.05	.....	.76	10	14.5
Total	7,470	......	91.53	75.12	4.56	.56	1.72	5.07	.....	5.06	.45	.....	6.18	.....	118.2
Mean	934	1.031	11.44	9.39	.57	.070	.22	.63	.....	.63	.06	.....	.77	16	14.8

	FECES.				
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,308	235.57	....	18.11	22.70
Mean	163	29.45	81.99	2.39	4.09

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	117.97	Ether extract in food	904.41
Nitrogen in urine 91.53		Ether extract in feces	32.70
Nitrogen in feces 18.11	109.64		+871.71
	+8.33		

[a] Composite.

Urine and feces chart.—Subject VI (C. H. S.)—Continued.

PERIOD No. 3.—NO PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
July 18 [a]	900	1.031	12.32	10.14	0.49	0.03	0.20	0.66	......	0.64	0.04	......	0.87	5	15.4
19 [a]	1,400	1.026	12.32	10.14	.49	.03	.20	.66	......	.64	.04	......	.87	5	15.4
20	1,540	1.023	12.95	10.82	.51	.04	.21	.64	......	.63	.05	......	.87	10	14.7
21	1,120	1.031	12.46	10.39	.43	.03	.22	.66	......	.72	.05	......	.92	10	17.0
22	830	1.034	11.34	9.09	.49	.05	.17	.61	......	.74	.07	......	.68	15	13.3
23	1,150	1.028	11.48	9.64	.48	.04	.21	.64	......	.60	.07	......	.85	10	15.7
24	1,180	1.029	10.78	8.86	.45	.08	.21	.60	......	.68	.07	......	.88	10	18.9
Total	8,120	......	83.65	69.08	3.34	.30	1.42	4.47	......	4.65	.39	......	5.94	......	110.4
Mean	1,160	1.029	11.95	9.87	.48	.043	.20	.64	......	.66	.06	......	.85	9	15.8

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,139	315.96	....	15.95	37.59
Mean	163	45.14	72.26	2.28	5.37

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		105.07	Ether extract in food	787.41
Nitrogen in urine	83.65		Ether extract in feces	37.59
Nitrogen in feces	15.95	99.60		+749.82
		+5.47		

[a] Composite.

PERIOD No. 4.—LOW PRESERVATIVE.

Urine.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms	Gm.	Gms.	Gm.	Gm.	Gms.		Gms.
July 25 a	900	1.033	10.50	8.90	0.45	0.08	0.21	0.63	....	0.64	0.05	......	0.88	5	15.4
26 a	1,000	1.031	10.50	8.90	.45	.08	.21	.63	...	.64	.05	......	.88	5	15.4
27	870	1.033	11.83	9.92	.48	.04	.21	.63	.....	.68	.06	......	.87	35	14.0
28	1,020	1.029	11.06	9.55	.53	.....	.18	.57	.....	.61	.05	......	.77	10	17.5
29	1,140	1.028	10.36	8.84	.51	.07	.18	.60	.....	.54	.05	......	.90	5	18.1
30	890	1.031	9.87	8.08	.50	.09	.18	.63	.....	.62	.05	......	.86	5	14.2
31	1,260	1.025	11.69	9.83	.47	.04	.20	.61	.....	.63	.04	......	.88	15	14.0
Aug. 1 a	1,135	1.029	10.92	8.95	.50	.....	.20	.58	....	.68	.07	......	.95	10	15.6
2 a	1,010	1.032	10.92	8.95	.50	.....	.20	.58	...	.68	.07	......	.95	10	15.6
Total	9,225	......	97.65	81.92	4.39	.....	1.77	5.46	.....	5.72	.49	......	7.94	......	139.8
Mean	1,025	1.030	10.85	9.10	.49	.067	.20	.61	.....	.64	.05	......	.88	11	15.5

Feces.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,419	283.09	....	19.87	42.57
Mean	158	31.45	80.05	2.21	4.73

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		128.05
Nitrogen in urine	97.65	
Nitrogen in feces	19.87	
		117.52
		+10.53

	Grams.
Ether extract in food	997.30
Ether extract in feces	42.57
	+954.73

a Composite.

Urine and feces chart.—Subject VI (C. H. S.)—Continued.

PERIOD No. 5.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 3	770	1.034	10.82	8.82	0.59	.....	0.18	0.55	0.89	0.66	0.05	0.18	0.77	20	11.9
4	860	1.032	11.20	9.38	.53	.....	.21	.61	.89	.66	.05	.18	.89	20	14.5
5	980	1.032	12.67	10.74	.50	0.02	.23	.64	.89	.66	.05	.18	.91	30	16.3
6	950	1.032	10.45	8.82	.55	.02	.19	.63	.89	.66	.05	.18	.79	10	11.7
7	1,350	1.023	11.20	9.36	.61	.05	.19	.60	.....	.61	.05	.....	.94	10	14.0
8[a]	1,220	1.029	11.69	9.92	.54	.03	.21	.58	.....	.68	.05	.....	.93	10	18.0
9[a]	1,660	1.022	11.69	9.92	.54	.03	.21	.58	.....	.68	.05	.....	.93	10	18.0
Total	7,790	.....	79.72	66.96	3.86	.....	1.42	4.19	.....	4.61	.35	.....	6.16	.....	104.4
Mean	1,113	1.029	11.39	9.57	.55	.03	.20	.60	.89	.66	.05	.18	.88	16	14.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,201	226.75	.....	14.41	33.63
Mean	172	32.39	81.12	2.06	4.80

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		109.00
Nitrogen in urine	79.72	
Nitrogen in feces	14.41	
		94.13
		+14.87

	Grams.
Ether extract in food	872.98
Ether extract in feces	33.63
	+839.35

[a] Composite.

PERIOD No. 6.—LOW PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 10	1,030	1.029	12.18	10.53	0.57	0.07	0.21	0.60	0.87	0.73	0.07	0.07	0.95	30	14.5
11	1,200	1.025	13.09	11.34	.60	.07	.20	.61	.79	.66	.04	.09	.82	15	14.2
12	1,410	1.022	12.04	10.34	.65	.06	.19	.61	.83	.68	.05	.10	.86	5	14.7
13	1,210	1.025	11.76	10.13	.54	.10	.20	.63	.79	.66	.05	.08	.90	10	13.8
14	1,640	1.020	13.23	11.62	.56	.08	.21	.65	.95	.72	.06	.17	1.08	15	13.3
15 *a*	1,240	1.025	10.64	9.01	.43	.....	.19	.61	.81	.61	.06	.14	.86	20	11.9
16 *a*	810	1.030	10.64	9.01	.43	.....	.19	.61	.81	.61	.06	.14	.86	20	11.9
Total	8,540	....	83.58	71.98	3.78	.....	1.39	4.32	5.85	4.67	.39	.79	6.33	.....	94.3
Mean	1,220	1.025	11.94	10.28	.54	.076	.20	.62	.84	.67	.06	.11	.90	16	13.5

Feces.					
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,320	262.68	....	14.52	36.96
Mean	189	37.53	80.10	2.07	5.28

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		108.60	Ether extract in food	869.91
Nitrogen in urine	83.58		Ether extract in feces	36.96
Nitrogen in feces	14.52			
		98.10		+832.95
		+10.50		

a Composite.

Urine and feces chart.—Subject VI (C. H. S.)—Continued.

PERIOD No. 7.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 17	1,040	1.027	12.11	10.31	0.53	.....	0.20	0.63	0.84	0.65	0.06	0.13	0.71	25	11.2
18	1,850	1.019	12.46	10.76	.58	0.05	.20	.63	.77	.62	.06	.09	.95	10	16.3
19	1,640	1.022	11.97	....	.49	.09	.22	.60	.90	.71	.06	.13	.89	10	16.3
20	1,740	1.021	12.32	10.42	.50	.05	.23	.63	.89	.68	.02	.19	.91	15	17.5
21	1,730	1.022	12.04	10.28	.43	.....	.25	.66	.84	.66	.04	.14	.86	15	20.3
22 *a*	1,880	1.020	11.69	9.65	.49	.04	.20	.61	.75	.57	.06	.12	.81	5	18.2
23 *a*	1,580	1.021	11.69	9.65	.49	.04	.20	.61	.75	.57	.06	.12	.81	5	18.2
Total	11,460	....	84.28	....	3.51	.....	1.50	4.37	5.74	4.46	.36	.92	5.95	......	118.0
Mean	1,637	1.022	12.04	10.18	.50	.054	.21	.62	.82	.64	.05	.13	.85	12	16.9

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,131	282.75	....	14.70	26.01
Mean	162	40.39	75.00	2.10	3.72

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		113.47
Nitrogen in urine	84.28	
Nitrogen in feces	14.70	
		98.98
		+14.49

	Grams.
Ether extract in food	970.05
Ether extract in feces	26.01
	+944.04

a Composite.

PERIOD No. 8. LOW PRESERVATIVE.

Date.	URINE.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Aug. 21	1,540	1.024	14.00	11.92	0.54	0.03	0.25	0.63	1.02	0.84	0.05	0.13	1.04	15	16.3
25	1,170	1.027	13.30	11.47	.61	.05	.22	.60	.98	.77	.06	.15	.93	20	14.5
26	1,300	1.024	12.64	10.69	.62	.07	.20	.57	.90	.69	.07	.14	.93	25	13.8
27	1,200	1.027	11.97	9.91	.55	.06	.21	.60	.91	.68	.08	.15	.84	35	15.9
28	1,180	1.029	12.53	10.44	.52	.03	.25	.63	.84	.70	.06	.08	.90	15	16.1
29	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
30	1,120	1.028	11.97	......	.58	......	.24	.60	.77	.58	.07	.12	.96	20	15.4
31	1,060	1.027	11.24	......	.62	.07	.20	.64	.88	.64	.05	.19	.85	15	14.0
Total	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Mean	1,224	1.026	12.52	10.85	.58	.052	.22	.61	.90	.70	.06	.14	.92	21	15.1

	FECES.				
	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,095	238.60	....	16.43	58.04
Mean	137	29.83	78.21	2.05	7.26

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food	137.76	Ether extract in food.	1,102.69
Nitrogen in urine 100.16		Ether extract in feces.	58.04
Nitrogen in feces. 16.43	116.59		+1,044.65
	+21.17		

Urine and feces chart.—Subject VI (C. H. S.)—Continued.

PERIOD No. 9.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*
Sept. 1	1,250	1.028	13.72	....	0.48	0.06	0.24	0.63	1.00	0.788	0.08	0.14	1.05	25	18.1
2	1,820	1.021	14.00	10.70	.56	.05	.23	.60	.93	.67	.08	.18	1.14	20	18.7
3	1,600	1.025	14.49	12.35	.50	.....	.26	.66	1.05	.80	.09	.16	1.06	25	19.8
4	1,440	1.023	13.37	11.41	.60	.05	.19	.62	.91	.72	.07	.12	.84	35	14.7
5 [a]	1,400	1.024	13.65	11.74	.48	.04	.23	.65	.95	.75	.07	.13	.95	20	17.0
6 [a]	1,400	1.025	13.65	11.74	.48	.04	.23	.65	.95	.75	.07	.13	.95	20	17.0
7 [a]	1,460	1.026	13.65	11.74	.48	.04	.23	.65	.95	.75	.07	.13	.95	20	17.0
Total	10,370	....	96.53	....	3.58	.....	1.61	4.46	6.74	5.22	.53	.99	6.94	......	121.3
Mean	1,481	1.025	13.79	11.61	.51	.047	.23	.64	.96	.75	.08	.14	.99	24	17.3

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,174	272.72	....	17.61	48.13
Mean	168	38.96	76.77	2.52	6.88

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		123.89
Nitrogen in urine	96.53	
Nitrogen in feces	17.61	
		114.14
		+9.75

Ether extract in food. Omitted.
Ether extract in feces. Omitted.

[a] Composite.

PERIOD No. 10.—LOW PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c. c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
Sept. 8......	960	1.030	14.00	11.94	0.65	......	0.21	0.60	0.94	0.73	0.08	0.13	1.04	15	9.8
9......	1,050	1.030	12.43	10.67	.50	......	.22	.58	.89	.66	.06	.17	.90	15	12.8
10......	1,200	1.030	12.08	10.17	.40	0.04	.23	.58	.83	.68	.05	.10	.83	20	17.5
11......	1,120	1.031	13.09	11.33	.39	.06	.22	.65	1.06	.83	.05	.18	.95	20	17.0
12[a]......	900	1.033	12.92	11.12	.46	.10	.21	.66	.91	.65	.07	.19	.98	15	14.7
13[a]......	1,350	1.027	12.92	11.12	.46	.10	.21	.66	.91	.65	.07	.19	.98	15	14.7
14......	1,430	1.025	15.54	13.35	.54	.12	.22	.70	.98	.81	.05	.12	1.12	25	13.5
Total..	8,010	......	92.98	79.70	3.40	......	1.52	4.43	6.52	5.01	.43	1.08	6.80	......	100.0
Mean..	1,144	1.029	13.28	11.39	.49	.084	.22	.63	.93	.72	.06	.15	.97	18	14.3

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period........	866	194.42	....	13.86	30.31
Mean..................	124	27.77	77.55	1.98	4.33

BALANCES FOR PERIOD.

	Grams.		Grams.
Nitrogen in food........	118.63	Ether extract in food..	984.11
Nitrogen in urine. 92.98		Ether extract in feces..	30.31
Nitrogen in feces. 13.86			
	106.84		+953.80
	+11.79		

[a] Composite.

Urine and feces chart.—Subject VI (C. H. S.)—Continued.

PERIOD No. 11.—LOW PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 15......	1,260	1.027	14.81	12.97	0.54	0.09	0.22	0.66	0.98	0.81	0.05	0.12	1.16	20	12.8
16......	970	1.030	12.18	10.39	.46	.06	.20	.61	.93	.72	.06	.15	.92	15	13.5
17......	980	1.032	12.67	10.93	.52	.06	.21	.63	.91	.71	.05	.15	1.04	20	15.4
18......	1,080	1.029	12.95	11.23	.60	.05	.20	.65	.91	.70	.03	.18	.93	15	15.2
19 *a*	1,100	1.031	12.25	10.43	.49	.07	.23	.61	.89	.67	.05	.17	.98	15	18.2
20 *a*	1,380	1.027	12.25	10.43	.49	.07	.23	.61	.89	.67	.05	.17	.98	15	18.2
21......	880	1.034	12.60	10.49	.56	.09	.20	.66	1.00	.77	.07	.16	.87	15	13.3
Total ..	7,650	......	89.71	76.87	3.66	.49	1.49	4.43	6.51	5.05	.36	1.10	6.88	......	106.6
Mean ..	1,093	1.030	12.82	10.98	.52	.07	.21	.63	.93	.72	.05	.16	.98	16	15.2

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period.......	913	188.99	....	12.78	32.87
Mean.................	130	27.00	79.30	1.83	4.70

BALANCES FOR PERIOD.

	Grams.		*Grams.*
Nitrogen in food.......	114.09	Ether extract in food.	1,046.17
Nitrogen in urine. 89.71		Ether extract in feces.	32.87
Nitrogen in feces. 12.78	102.49		+1,013.30
	+11.60		

a Composite

PERIOD No. 12. HIGH PRESERVATIVE.

Date.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.
	c. c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 22	1,400	1.028	14.25	12.13	0.54	0.05	0.24	0.66	1.04	0.82	0.06	0.16	0.94	15	22.9
23	1,400	1.027	14.10	12.08	.58	.07	.23	.64	1.10	.85	.06	.19	1.13	25	18.0
24	1,400	1.029	13.44	11.14	.54	.08	.23	.63	1.02	.81	.05	.16	1.05	15	23.4
25	1,420	1.029	13.76	11.80	.56	.06	.24	.64	1.05	.85	.04	.16	1.02	10	23.4
26 [a]	1,180	1.032	12.78	11.09	.46	.10	.22	.61	.94	.72	.06	.16	1.00	15	20.8
27 [a]	1,300	1.030	12.78	11.09	.46	.10	.22	.61	.94	.72	.06	.16	1.00	15	20.8
28	1,370	1.032	14.42	12.11	.67	.10	.24	.60	1.23	.94	.07	.22	1.18	10	22.9
Total	9,470	......	95.53	81.44	3.81	.56	1.62	4.39	7.32	5.71	.40	1.21	7.32	.....	152.2
Mean	1,353	1.030	13.65	11.63	.54	.08	.23	.63	1.05	.82	.06	.17	1.05	15	21.75

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,106	217.44	....	15.48	24.42
Mean	158	31.06	80.34	2.21	3.49

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		127.31	Ether extract in food	942.83
Nitrogen in urine	95.53		Ether extract in feces	24.42
Nitrogen in feces	15.48			
		111.01		+918.41
		+16.30		

[a] Composite.

Urine and feces chart.—Subject VI (C. H. S.)—Continued.

PERIOD No. 13.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Sept. 29	1,240	1.031	13.79	11.87	0.63	0.02	0.23	0.60	1.14	0.93	0.06	0.15	1.02	20	19.8
30	1,160	1.033	13.65	11.59	.63	.09	.23	.68	1.10	.87	.05	.18	1.01	10	19.1
Oct. 1	1,300	1.030	14.21	12.12	.59	.07	.23	.63	1.03	.81	.07	.15	.93	25	19.1
2	1,200	1.031	13.72	11.66	.55	.06	.24	.62	1.13	.87	.07	.19	.91	15	18.4
3 [a]	1,400	1.030	14.21	12.19	.54	.07	.22	.66	1.03	.79	.06	.18	1.02	10	19.8
4 [a]	1,300	1.029	14.21	12.19	.54	.07	.22	.66	1.03	.79	.06	.18	1.02	10	19.8
5	1,200	1.032	13.16	11.04	.43	.08	.25	.64	1.09	.84	.05	.20	.78	10	19.8
Total	8,800	......	96.95	82.66	3.91	.46	1.62	4.49	7.55	5.90	.42	1.23	6.69	......	135.8
Mean	1.257	1.031	13.85	11.81	.56	.066	.23	.64	1.08	.84	.06	.18	.96	14	19.4

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,164	269.70	....	13.97	40.74
Mean	166	38.53	76.83	2.00	5.82

BALANCES FOR PERIOD.

		Grams.
Nitrogen in food		124.07
Nitrogen in urine	96.95	
Nitrogen in feces	13.97	
		110.92
		+13.65

	Grams.
Ether extract in food	1,042.96
Ether extract in feces	40.74
	+1,002.22

[a] Composite.

PERIOD No. 14.—HIGH PRESERVATIVE.

Date.	Urine.														
	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
Oct. 6	1,150	1.031	13.20	11.33	0.54	0.04	0.22	0.66	0.94	0.69	0.07	0.18	0.82	20	[b] 17.0
7	1,190	1.032	12.04	10.05	.49	.07	.20	.64	.92	.66	.06	.20	.88	15	[b] 17.0
8	1,520	1.027	14.00	11.82	.57	.12	.21	.72	1.03	.80	.07	.16	.89	15	[b] 17.0
9	1,260	1.027	13.16	11.00	.66	.10	.18	.68	1.01	.77	.06	.18	.94	10	[b] 17.0
10[a]	1,280	1.027	12.67	10.49	.50	.08	.21	.66	.90	.67	.06	.17	.88	10	[b] 17.0
11[a]	1,140	1.031	12.67	10.49	.50	.08	.21	.66	.90	.67	.06	.17	.88	10	[b] 17.0
12	980	1.033	12.88	10.81	.64	.....	.21	.65	.94	.68	.07	.19	.88	10	[b] 12.4
13	1,460	1.025	13.30	11.07	.55	.....	.16	.63	.91	.70	.07	.14	.91	15	[b] 12.4
Total	9,980	....	103.92	87.06	4.45	.....	1.60	5.30	7.55	5.64	.52	1.39	7.08	.....	[b] 126.8
Mean	1,248	1.029	12.99	10.88	.56	.081	.20	.66	.94	.71	.07	.17	.89	13	[b] 15.9

Feces.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,073	210.74	....	13.95	31.12
Mean	134	26.34	80.36	1.74	3.89

BALANCES FOR PERIOD.

		Grams.		Grams.
Nitrogen in food		132.68	Ether extract in food	1,245.74
Nitrogen in urine	103.92		Ether extract in feces	31.12
Nitrogen in feces	13.95	117.87		+1,214.62
		+14.81		

[a] Composite.

[b] Chlorides done in composite.

Urine and feces chart.—Subject VI (C. H. S.)—Continued.

PERIOD No. 15.—HIGH PRESERVATIVE.

URINE.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gms.*	*Gms.*		*Gms.*
Oct. 14	930	1.030	11.80	9.53	0.54	0.07	0.20	0.63	0.98	0.70	0.07	0.21	0.81	15	12.4
15	1,125	1.030	12.95	10.84	.40	.04	.24	.68	.93	.67	.05	.21	.91	10	13.1
16	850	1.032	10.85	8.77	.51	.06	.17	.63	.80	.56	.07	.17	.75	15	13.1
17[a]	1,070	1.031	12.95	10.93	.47	.04	.24	.63	1.01	.77	.05	.19	1.00	10	13.1
18[a]	1,270	1.030	12.95	10.93	.47	.04	.24	.63	1.01	.77	.05	.19	1.00	10	13.1
19	1,300	1.029	15.82	13.39	.65	.07	.24	.63	1.20	.93	.08	.19	1.00	25	14.0
20	1,180	1.030	14.98	12.71	.56	......	.20	.63	1.01	.78	.07	.16	1.00	10	14.0
21	940	1.032	12.11	9.81	.52	......	.18	.64	.94	.70	.07	.17	.91	10	14.0
22	1,160	1.030	13.02	10.93	.45	.06	.23	.64	1.04	.80	.05	.19	1.04	10	18.0
23	1,580	1.024	12.53	10.44	.55	.09	.17	.63	.94	.70	.07	.17	.91	15	18.0
Total	11,405	......	129.96	108.28	5.12	......	2.11	6.37	9.86	7.38	.63	1.85	9.33	......	142.8
Mean	1,141	1.030	13.00	10.83	.51	.059	.21	.64	.99	.74	.06	.19	.93	13	14.28

FECES.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	*Gms.*	*Per ct.*	*Gms.*	*Gms.*
Total for period	1,381	307.55	......	16.57	59.38
Mean	138	30.76	77.73	1.66	5.94

BALANCES FOR PERIOD.

		Grams.		*Grams.*
Nitrogen in food		165.20	Ether extract in food	1,489.39
Nitrogen in urine	129.96		Ether extract in feces	59.38
Nitrogen in feces	16.57			
		146.53		+1,430.01
		+18.67		

[a] Composite.

PERIOD No. 16.—NO PRESERVATIVE.

Urine.

Date.	Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.
	c.c.		Gms.	Gms.	Gms.	Gm.	Gms.	Gms.	Gms.	Gms.	Gm.	Gms.	Gms.		Gms.
Oct. 24 [a]	1,220	1.029	12.22	10.27	0.44	0.09	0.20	0.61	0.93	0.68	0.07	0.18	0.96	10	18.0
25 [a]	2,050	1.022	12.22	10.27	.44	.09	.20	.61	.93	.68	.07	.18	.96	10	18.0
26	1,250	1.030	12.88	10.88	.50	.08	.21	.60	.99	.79	.06	.14	1.00	15	15.9
27	1,220	1.030	13.09	10.24	.54	.08	.20	.58	.92	.68	.06	.18	.91	10	15.9
28	940	1.032	11.20	9.19	.58	.09	.18	.60	.90	.69	.07	.14	.90	20	15.9
29	1,180	1.030	12.53	10.62	.51	.03	.19	.63	.93	.65	.07	.21	.88	15	15.9
30	1,630	1.025	12.32	10.20	.57	.04	.20	.61	.98	.74	.05	.19	......	10	15.9
Total	9,490	......	86.46	71.67	3.58	.50	1.38	4.24	6.58	4.91	.45	1.22	......	......	115.5
Mean	1,356	1.028	12.35	10.24	.51	.071	.20	.61	.94	.70	.06	.17	.90	13	16.5

Feces.

	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.
	Gms.	Gms.	Per ct.	Gms.	Gms.
Total for period	1,273	288.21	....	16.55	33.10
Mean	182	41.17	77.36	2.36	4.73

Balances for Period.

		Grams.		Grams.
Nitrogen in food		100.68	Ether extract in food	937.28
Nitrogen in urine	86.46		Ether extract in feces	33.10
Nitrogen in feces	16.55			
		103.01		—904.18
		-2.33		

[a] Composite

DAILY FOOD CHARTS.

The following tables present the recorded numerical data concerning the daily bill of fare of the diet squad, and it will be recognized, as explained in the opening statement, that the diet is an ample one. The additions at the foot of each page show the total weight of food consumed daily, exclusive of tea and coffee, but including milk, the total nitrogen and fat consumption, and, in some cases, the estimated fuel value of the food. The total food weights have only relative value, because of the very variable nature of the items in the menu, but are suggestive and are therefore included.

The records in the fourth column under each subject are close approximations only. Enough additions are made for each period to show with a fair degree of closeness the extent of food consumption, measured in this way. The footings have naturally a much greater relative than absolute value.

It will be noticed that the men exhibit very different tastes; in one case, for example, the consumption of butter is abnormally high, while in another the milk consumption is very high. All the men were found to be very fond of sugar, which was used liberally directly and weighed as such, and also in the form of puddings, custards, and certain sauces, which were made sweeter than most people would desire. The fuel value of the various foods was calculated in part from the daily analyses and in part from the records of the cook, who worked under the observation of one of the laboratory assistants, and was able to state closely the amount of carbohydrate employed in various items. For some of the fruits and a few other things the values have been taken from the Atwater tables, published by the Department of Agriculture. In any event, the comparative values hold good, and this is the main object of the computations.

The nitrogen and fat additions have been used in computing the balances of the preceding tables, and the fuel values found have been summarized as shown below. A number of days from each principal period were taken at random, and the values for these days computed and added. From these additions the means were taken, and these are the figures given below for the fore period, the low preservative period, the first high preservative period, the second high preservative period, and the after period. It will be noticed that there is no characteristic change in the daily caloric values through the whole season; while for some of the men there is an increase in the calories used, for others there is the reverse change. In general the values remain high and show no relation to the administration of preservative.

Mean calories consumed.

	Number of the subject.					
	I	II	III	IV	V	VI
Fore period	2,948	3,459	3,494	2,903	3,167	3,545
Low preservative period	2.744	3,378	3,839	3,114	3,061	3,572
First high preservative period	3,412	3,377	3,827	3,112	3,191	3,974
Second high preservative period	3,287	3,123	3,677	3,230	3,071	3,938
After period	3,542	3,753	3,741	3,802	3,005	3,543

DAILY FOOD CHART.

DATE: JULY 2.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.4	1.5	349.5	4.9	5.24	979	280.5	3.9	4.2	785	232.5	3.24	3.48	651	207.5	2.9	3.11	581	308.0	4.3	4.62	862	294.0	4.1	4.41	823
Butter		84.0	69.0		57.96	539	73.0		61.32	580	103.0		86.52	804	77.0		64.68	612	86.0		72.24	672	88.0		73.92	687
Sugar			59.0			242	150.0			615	91.0			373	24.0			98	106.0			435	104.0			426
Milk	.54	3.5	400.0	2.16	14.0	268	400.0	2.16	14.0	268	400.0	2.16	14.0	268	650.0	3.6	22.75	436	650.0	3.6	22.75	436	400.0	2.16	14.00	268
Cream	.4	18.5	55.0	.22	10.17	111																				
Meat, roast beef	5.4	3.6	39.0	2.1	1.4	67	41.0	2.2	1.47	71	64.0	3.4	2.24	110	57.0	3.07	1.99	98	65.0	3.5	2.27	112	78.0	4.2	2.73	134
Meat, roast beef hash	3.8	10.5	83.0	3.15	8.71	178	104.0	3.9	10.92	224	88.0	3.3	9.24	189	114.0	4.3	11.97	245	92.0	3.5	9.66	198	82.0	3.1	8.61	176
Potatoes, mashed	.33	1.0	104.0	.34	1.04	104	113.0	.33	1.13	113	115.0	.38	1.15	115	15.0	.5	.15	15	104.0	.33	1.04	104	123.0	.42	1.23	123
Potatoes, mashed	.30	1.0	142.0	.42	1.42	142	122.0	.36	1.22	122	151.0	.5	1.51	151	101.0	.35	1.01	101	117.0	.40	1.17	117	131.0	.42	1.31	131
Turnips	.1		26.0	.02		5	77.5	.08		15																
Gravy		.5	26.0		.13	1	60.0		.3	3	60.0		.3	3	29.0		.14	1	60.0		.3	3	60.0		.30	3
Soup		.5	173.0		.86	12	173.0		.86	12	173.0		.86	12	173.0		.86	12	173.0		.86	12	173.0		.86	12
Eggs	2.3	14.7	29.0	.66	4.26	57	42.0	.96	6.17	82	47.0	1.08	6.90	92	35.0	.80	5.14	69	34.0	.78	4.99	67	39.0	.9	5.73	76
Malta vita	1.14		47.0	.53		166	44.0	.61		156	43.0	.49		152	14.0	.15		50	41.0	.46		145	42.0	.47		149
Custard	.7	4.7	112.0	.78	5.26	206	110.0	.78	5.17	202	128.0	.90	6.01	236	95.0	.60	4.46	174	102.0	.70	4.79	188	102.0	.70	4.79	188
Rice pudding	.26	3.6	90.0	.23	3.24	116	93.0	.24	3.34	120	82.0	.21	2.95	106	96.0	.25	3.45	124	83.0	.21	2.98	107	80.0	.20	2.88	103
Tomatoes	.11		79.0	.09		18	71.5	.08		16	70.0	.08		16	71.0	.08		16	92.5	.10		21	75.0	.08		17
Oranges	.01		90.0			48	116.0			61	129.0			68	124.0			64	119.0			63	119.0			63
Coffee			750.0				500.0												250.0							
Tea							500.0				1,000.0								250.0				500.0			
Total			1,973.0	15.60	113.69	3,259	2,071.0	15.56	110.10	3,445	1,977.0	15.74	135.16	3,346	1,883.0	16.00	119.71	2,696	2,233.0	17.88	127.67	3,542	1,990.0	16.75	120.77	3,379

DATE: JULY 3.

Bread	1.25	1.5	282.0	3.5	4.23		251.0	3.1	3.76		242.0	3.02	3.63		122.5	1.53	1.83		232.0	2.9	3.48		240.0	3.00	3.60	
Butter		84.0	91.0		76.44		68.0	0	57.12		108.0		90.72		90.0		75.6		89.0		74.76		71.0	0	59.64	
Sugar			57.0				206.0				63.0				175.0				200.0				160.0			
Milk	.54	3.5	250.0	1.3	8.75		500.0	2.7	17.5		250.0	1.3	8.75		500.0	2.7	17.5		250.0	1.35	8.75		250.0	1.35	8.75	
Cream	.40	18.5	103.0	.41	16.82		120.0	.48	22.2		120.0	.48	22.2		370.0	1.48	68.45		120.0	.48	22.2		120.0	.48	22.2	
Meat, roast beef hash	3.0	4.0	84.0	2.5	3.36		94.5	2.8	3.78		96.0	2.88	3.84		92.0	2.76	3.68		103.5	3.1	4.14		107.5	3.22	4.3	
Meat, roast veal	4.70	11.1	99.0	4.6	10.98		98.5	4.6	10.93		88.0	4.1	9.76		99.0	4.65	11.0		98.5	4.6	10.93		100.0	4.7	11.1	
Potatoes, mashed	.3	1.3	257.0	.77	3.44		257.0	.77	3.34		279.0	.83	3.62		144.0	.43	1.87		309.0	.92	3.99		335.0	1.0	4.35	
Sliced tomatoes	.1		163.0	.16			153.0	.15			171.0	.22			157.0	.15			168.0	.16			179.0	.17		
String beans	.21		84.0	.17			90.0	.18			104.0	.21							93.0	.19			86.0	.18		
Malta vita	1.14		42.0	.47			64.0	.72			43.0	.49			46.0	.52			36.0	.41			40.0	.46		
Tomato soup		1.0	200.0		2.0		200.0		2.0		200.0		2.0		200.0		2.0		200.0		2.00		200.0		2.00	
Chocolate pudding	.48	1.35	58.0	.28	.78		114.0	.54	1.53		115.0	.55	1.55		131.0	.62	1.76		147.0	.70	1.97		136.0	.63	1.83	
Prunes	.12		58.0	.07	0		72.0	.09			62.0	.07			65.0	.08			69.0	.08			61.0	.07		
Apple sauce	.13		46.0	.06			144.0	.18			155.0	.2			149.0	.19			159.0	.20			134.0	.17		
Eggs	1.7	12.3	43.0	.73	5.28		40.0	.68	4.92		41.0	.69	5.04		42.0	.71	5.16		47.0	.8	5.78		61.0	1.04	7.5	
Coffee			500.0				250.0												250.0							
Iced tea			250.0				500.0				500.0								500.0				750.0			
Total			1,917.0	15.02	132.08		2,472.0	16.99	127.08		2,137.0	15.04	151,11		2,383.0	15.82	188.85		2,321.0	15.89	138.00		2,281.0	16.47	125.27	

DATE: JULY 4.

Bread	1.4	1.5	235.0	3.3	3.52		200.0	2.8	3.0		293.0	4.1	4.39		156.0	2.18	2.34		137.0	1.9	2.05		295.0	4.1	4.42	
Butter	0	84.0	76.0		63.84		43.0		36.12		95.0		79.8		68.0		57.12		61.0		51.24		84.0		70.56	
Sugar			69.5				99.0				82.0				119.0				120.0				149.0			
Milk	.54	3.5	550.0	2.97	19.25		300.0	1.6	10.5		550.0	2.97	19.25		800.0	4.32	28.0		476.0	2.57	16.66		300.0	1.62	10.5	
Cream	.40	18.5	120.0	.48	22.2		150.0	.6	27.75		60.0	.24	11.1		120.0	.48	22.2		120.0	.48	22.2		180.0	.72	33.3	
Meat, pot roast	5.4	14.5	51.0	2.75	7.39		50.5	2.7	7.32		56.0	3.12	8.12		60.0	3.24	8.7		61.5	3.31	8.91		55.5	3.0	8.04	
Eggs	1.5	9.35	66.0	.99	6.17		78.5	1.17	7.33		68.0	1.02	6.35										64.5	.96	6.03	
Potatoes, mashed	.3	.7	150.0	.45	1.05		216.0	.64	1.51		216.0	.64	1.51		54.0	.16	.37		155.0	.46	1.08		200.0	.6	1.4	
Baked beans	1.2	2.4	161.0	1.9	3.86		165.0	2.0	3.96		163.0	1.95	3.91		29.0	.34	.69		158.0	1.9	3.79		162.0	1.84	3.88	
Lima beans	1.0		31.0	.3			169.0	1.7			78.0	.78			4.0				92.0	.92			84.0	.84		
Beef soup		6.5	250.0		16.25		250.0		16.25		250.0		16.25		250.0		16.25		250.0		16.25		250.0		16.25	
Rice	.27		63.0	.17			50.5	.13			48.0	.12			69.0	.18			60.0	.16			55.0	.14		
Gravy		.51	60.0		.3		60.0		.3		60.0		.3		60.0		.3		60.0		.3		60.0		.3	
Cabbage	.24		48.0	.11			58.0	.14			62.0	.15							57.0	.13			64.0	.15		
Malta vita	1.14		24.0	.27			67.0	.76			74.0	.84			79.0	.9			87.0	1.0			72.0	.82		
Dates	.2		55.0	.11			62.0	.14			63.0	.14			65.0	.14			91.0	.2			80.0	.18		
Apple sauce	.13		22.0	.03			88.0	.11			75.0	.10			80.0	.1			78.0	.1			97.0	.12		
Coffee			250.0				750.0												200.0				250.0			
Tea			250.0								250.0								360.0				500.0			
Total			2,032.0	13.83	143.83		2,107.0	14.49	114.04		2,293.0	16.17	150.98		2,013.0	12.04	135.97		2,064.0	13.13	122.48		2,252.0	15.09	154.68	

Daily food chart—Continued.

DATE: JULY 5.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Subject I Nitrogen.	Subject I Ether extract.	Subject I Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Subject II Nitrogen.	Subject II Ether extract.	Subject II Estimated fuel value.	Subject III (A. G.). Amount of food.	Subject III Nitrogen.	Subject III Ether extract.	Subject III Estimated fuel value.	Subject IV (O. F. L.) Amount of food.	Subject IV Nitrogen.	Subject IV Ether extract.	Subject IV Estimated fuel value.	Subject V (A. M. N.). Amount of food.	Subject V Nitrogen.	Subject V Ether extract.	Subject V Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Subject VI Nitrogen.	Subject VI Ether extract.	Subject VI Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.4	1.5	151.0	2.11	2.26	423	178.0	2.4	2.67	498	224.0	3.13	3.36	627	71.0	1.0	1.06	199	211.0	2.9	3.16	591	248.0	3.4	3.72	694
Butter	.....	84.0	58.0	.....	48.72	453	62.0	.....	52.08	484	91.0	.....	76.44	711	34.0	.....	28.56	266	60.0	.....	50.4	469	77.0	.....	64.68	601
Sugar	.....	.....	63.0	.....	.....	258	94.0	.....	.....	385	57.0	.....	.....	234	112.0	.....	.....	459	111.0	.....	.....	455	103.0	.....	.....	422
Milk	.54	3.5	500.0	2.7	17.5	335	500.0	2.7	17.5	335	250.0	1.35	8.75	168	927.0	4.6	32.44	621	209.0	1.12	7.31	140	250.0	1.35	8.75	168
Cream	.4	18.5	137.0	.58	25.34	275	110.0	.44	20.35	221	90.0	.36	16.65	181	50.0	.2	9.25	100	100.0	.4	18.5	201	143.0	.57	26.45	287
Meat, chicken	4.2	3.0	83.0	2.68	2.49	113	86.5	3.63	2.59	118	79.0	3.31	2.37	107	79.0	3.31	2.37	107	82.0	3.44	2.46	112	85.5	3.59	2.56	115
Eggs	1.8	18.4	61.0	1.09	11.22	132	60.0	1.08	11.04	130	71.0	1.27	13.06	154	63.0	1.13	11.59	137	66.0	1.18	12.14	143	85.0	1.53	15.64	184
Potatoes, mashed	.26	3.5	186.0	.48	6.51	186	92.0	.23	3.22	92	162.0	.42	5.7	162	54.0	.14	1.89	54	124.0	.32	4.34	124	170.0	.44	5.95	170
Baked beans	1.2	2.4	128.0	1.5	3.07	173	.....	.....	.....	.....	137.0	1.64	3.28	185	.....	.....	.....	.....	120.0	1.44	2.88	162	142.0	1.7	3.4	192
Gravy	.4	7.65	48.0	.19	.67	39	92.0	.36	7.03	75	87.0	.34	6.65	70	96.0	.38	7.34	78	89.0	.35	6.8	72	90.0	.36	6.88	73
Soup	.4	.....	250.0	1.0	.....	40	250.0	1.0	.....	40	250.0	1.0	.....	40	250.0	1.0	.....	40	250.0	1.0	.....	40	250.0	1.0	.....	40
Pudding	.3	1.0	83.0	.24	.83	83	137.0	.41	1.37	137	124.0	.37	1.24	124	138.0	.41	1.38	138	158.0	.47	1.58	158	143.0	.42	1.43	143
Cake	1.0	9.75	96.0	.96	9.36	372	110.0	1.1	10.72	427	59.0	.59	5.75	229	135.0	1.35	13.16	524	105.0	1.05	10.23	407	134.0	1.34	13.06	520
Malta vita	1.14	.....	36.0	.41	.....	127	40.0	.45	.....	142	37.0	.42	.....	131	30.0	.34	.....	106	29.0	.33	.....	103	34.0	.38	.....	120
Tomatoes	.1	.....	104.0	.1	.....	24	117.0	.11	.....	27	105.0	.1	.....	26	110.0	.11	.....	25	139.0	.14	.....	32	100.0	.1	.....	23
Prunes	.16	.....	61.0	.1	.....	50	.....	.....	.....	.....	57.0	.09	.....	47	.....	.....	.....	.....	59.0	.09	.....	48	60.0	.1	.....	49
Coffee	.....	.....	250.0	.....	.....	.....	250.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	250.0	.....	.....	.....	250.0	.....	.....	.....
Tea	.....	.....	250.0	.....	.....	.....	250.0	.....	.....	.....	500.0	.....	.....	.....	.....	.....	.....	.....	750.0	.....	.....	.....	500.0	.....	.....	.....
Total	.....	.....	2,045.0	14.14	130.97	3,083	1,929.0	13.91	128.57	3,131	1,880.0	14.39	143.25	3,196	2,149.0	13.97	109.04	2,854	1,912.0	14.23	119.80	3,257	2,115.0	16.28	152.52	3,801

DATE: JULY 6.

Bread	1.3	1.5				183.0	2.37	2.74	247.0	3.21	3.7	120.0	1.56	1.8	225.0	2.92	3.37	273.0	3.54	4.09
Butter		84.0	4.0		3.36	46.0		38.64	102.0		85.68	65.0		54.6	62.0		52.08	66.0		55.44
Sugar			14.0			155.0			96.0			151.0			166.0			144.0		
Milk	.54	3.5	250.0	1.3	8.75	210.0	1.13	7.35	153.0	.82	5.35	750.0	4.05	26.25	250.0	1.35	8.75	250.0	1.35	8.75
Cream	.4	18.5	40.0	.16	7.4	150.0	.6	27.75	150.0	.6	27.75	110.0	.44	20.35	140.0	.56	25.9	150.0	.6	27.75
Meat, veal loaf	3.8	11.8				80.5	3.0	9.49	80.0	3.04	9.4	83.0	3.15	9.79	84.0	3.19	9.91	86.5	3.26	10.2
Meat, roast beef	4.4	12.3				72.5	3.19	8.91	75.0	3.3	9.22	79.0	3.47	9.71	82.0	3.6	10.08	81.5	3.58	10.02
Potatoes, boiled	.2	4.35				179.0	.35	7.78	176.0	.35	7.65	142.0	.28	6.17	155.0	.32	6.74	208.0	.41	9.04
Eggs	1.5	9.85	99.0	1.4	9.75	87.0	1.3	8.56	102.0	1.53	10.04	104.0	1.56	10.24	91.0	1.36	8.96	98.0	1.4	9.65
String beans	.2					71.0	.14		76.0	.15		68.0	.13		63.0	.12		63.0	.12	
Gravy	.15	18.15				103.0	.16	18.69	113.0	.17	20.5	113.0	.17	20.5	115.0	.17	20.87	115.0	.17	20.87
Soup	.11	1.85				200.0	.22	3.7	200.0	.22	3.7	200.0	.22	3.7	200.0	.22	3.7	200.0	.22	3.7
Rice	.27					64.0	.18		76.0	.21		77.0	.22		67.0	.18		75.0	.2	
Coffee jelly	.27					95.0	.25		144.0	.38		118.0	.31		139.0	.37		138.0	.37	
Malta vita	1.14		24.0	.27		32.0	.36		35.0	.4		36.0	.4		34.0	.38		45.0	.51	
Apple sauce	.13		12.0			79.0	.10		70.0	.09		84.0	.10		79.0	.1		85.0	.11	
Tomatoes	.10					147.0	.14		155.0	.15		145.0	.14		146.0	.14		134.0	.13	
Coffee						710.0									100.0			251.0		
Tea									500.0						500.0			250.0		
Total			443.0	3.13	29.26	1,954.0	13.49	133.61	2,050.0	14.62	182.99	2,445.0	16.20	163.11	2,098.0	14.98	150.36	2,212.0	15.97	159.51

DATE: JULY 7.

Bread	1.5	1.5	135.0	1.96	1.96	262.0	3.93	3.93	289.0	4.33	4.33	196.0	2.94	2.94	287.0	4.30	4.30	368.0	5.52	5.52
Butter		84.0	56.0		47.04	61.0		51.24	122.0	0	102.42	149.0		125.16	64.0		53.76	89.0		74.76
Sugar			86.0			212.0			120.0			184.0			198.0			211.0		
Milk	.54	3.5	540.0	2.91	18.9	188.0	1.01	6.58	500.0	2.7	17.5	1,250.0	6.75	43.75	250.0	1.35	8.75	290.0	1.56	10.15
Cream	.4	18.5	50.0	.2	9.25	50.0	.2	9.25	50.0	.2	9.25				50.0	.2	9.25	50.0	.2	9.25
Meat, roast beef	4.3	12.0	49.0	2.1	5.88	62.0	2.66	7.44	76.0	3.26	9.12	69.0	2.9	8.28	61.0	2.62	7.32	90.0	3.87	10.8
Meat, pot roast	5.7	4.9	68.0	3.8	3.33	69.5	3.96	3.34	65.0	3.7	3.18	66.0	3.76	3.05	71.0	4.04	3.47	70.5	4.0	3.45
Potatoes, mashed	.2	2.0	261.0	.52	5.22	206.0	.4	4.12	224.0	.44	4.48				115.0	.23	2.3	184.0	.37	3.68
Eggs	2.0	10.0	61.0	1.22	6.1	63.5	1.27	6.35	60.0	1.2	6.00	64.0	1.28	6.4	64.5	1.28	6.45	75.0	1.5	7.50
Stewed tomatoes	.31		90.0	.27		100.0	.31		107.0	.4		100.0	.31		114.0	.35		75.0	.2	
String beans	.2		79.0	.15		90.0	.18		94.0	.18					30.0	.06		87.0	.17	
Gravy		1.8	34.0		.61	51.0		.91	52.0		.93	49.0		.88	45.0		.81	51.0		.91
Tomato soup	.18	.8	200.0	.36	1.6	200.0	.36	1.6	200.0	.36	1.6	200.0	.36	1.6	200.0	.36	1.6	200.0	.36	1.6
Corn flakes	1.0		26.0	.26		37.0	.37		32.0	.32		34.0	.34		40.0	.4		46.0	.46	
Apple pudding	.38	2.55	84.0	.31	2.14	96.0	.36	2.44	115.0	.43	2.93	116.0	.44	2.95	116.0	.44	2.95	115.0	.43	2.93
Prune pudding	.6		30.0	.18		41.0	.24		49.0	.3		50.0	.3		54.0	.32		62.0	.37	
Oranges	.1		135.0	.14		120.0	.12		123.0	.12		115.0	.12		159.0	.16		114.0	.11	
Coffee			500.0			500.0			250.0						200.0			500.0		
Tea						250.0									500.0			250.0		
Total			1,984.0	14.38	102.03	1,903.0	15.37	97.20	2,278.0	17.94	161.74	2,642.0	19.50	195.01	1,919.0	16.32	100.96	2,178.0	19.48	130.55

Daily food chart—Continued.

DATE: JULY 8.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Subject I Nitrogen.	Subject I Ether extract.	Subject I Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Subject II Nitrogen.	Subject II Ether extract.	Subject II Estimated fuel value.	Subject III (A. G.). Amount of food.	Subject III Nitrogen.	Subject III Ether extract.	Subject III Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Subject IV Nitrogen.	Subject IV Ether extract.	Subject IV Estimated fuel value.	Subject V (A. M. N.). Amount of food.	Subject V Nitrogen.	Subject V Ether extract.	Subject V Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Subject VI Nitrogen.	Subject VI Ether extract.	Subject VI Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.4	1.5	126.0	1.76	1.89	353	127.0	1.77	1.9	356	220.0	3.08	3.3	616	192.0	2.68	2.88	538	146.0	2.04	2.19	409	126.0	1.76	1.89	353
Butter		84.0	41.0		34.44	320	57.0		47.88	445	84.0		70.56	656	100.0		84.0	781	59.0		49.56	461	139.0		116.76	1,086
Sugar			90.0			369	56.0			230	81.0			332	153.0			627	131.0			537	127.0			521
Milk	.53	3.5	700.0	3.71	24.5	469	500.0	2.65	17.5	335	750.0	3.97	26.25	502	1,000.0	5.3	35.0	670	455.0	2.41	16.92	305	280.0	1.48	9.8	188
Cream	.40	18.5	140.0	.56	25.9	281	100.0	.4	18.5	201	140.0	.56	25.9	281	100.0	.4	18.5	201	140.0	.56	25.9	281	140.0	.56	25.9	281
Meat, roast beef	5.0	13.3	76.0	3.8	10.1	192	97.5	4.87	12.96	246	94.0	4.7	12.5	237	96.0	4.8	12.76	242	102.5	5.12	13.63	258	94.0	4.7	12.5	239
Meat, roast beef hash	3.6	10.3	90.0	3.24	9.27	188	141.0	5.07	14.52	295	153.0	5.5	15.75	320	83.0	2.98	8.54	173	92.0	3.31	9.47	192	164.0	5.9	16.89	343
Potatoes, boiled	.33		220.0	.72		220	228.0	.76		228	247.0	.81		247	74.0	.24		74	143.0	.47		143	224.0	.74		224
Gravy, thin	.1	1.0					50.0		.5	6	48.0	.05	.5	6	48.0	.05	.5	6	52.0	.05	.5	6	54.0	.05	.5	6
Boiled onions	.09		49.0	0		11	59.0	.05		14	83.0	.07		19					93.0	.08		21	82.0	.07		18
Soup	.5	1.4	200.0	1.0	2.8	130	200.0	1.0	2.8	130	200.0	1.0	2.8	130	200.0	1.0	2.8	130	200.0	1.0	2.8	130	200.0	1.0	2.8	130
Cabbage	.24		61.0	.14		16	52.0	.12		14	57.0	.13		15	60.0	.14		16	63.0	.15		17	71.0	.17		19
Prune jelly	.2		102.0	.2		14	109.0	.22		14	113.0	.23		15	114.0	.23		15	130.0	.26		17	145.0	.29		19
Corn flakes	1.0		20.0	.2		73	29.0	.29		106	29.0	.29		106	32.0	.32		117	31.0	.31		114	38.0	.38		139
Coffee cake	.86	9.5	54.0	.46	5.13	245	57.0	.49	5.41	259									58.0	.50	5.51	263	60.0	.51	5.7	272
Plain pudding		.8	87.0		.69	77	107.0		.85	95	109.0		.87	97	83.0	0	.66	74	116.0		.95	103	99.0		.79	88
Bananas	.1		226.0	.23		210	200.0	.2		186	189.0	.19		176	213.0	.21		208	176.0	.18		164	206.0	.21		192
Oranges	.1		63.0	.06		33	59.0	.06		31	67.0	.07		36	49.0	.05		26	47.0	.05		25	63.0	.06		33
Coffee							500.0												100.0				500.0			
Tea																			250.0				250.0			
Total			2,345.0	16.08	114.72	3,201	2,229.0	17.95	122.82	3,191	2,664.0	20.65	158.43	3,791	2,607.0	18.40	165.64	3,898	2,235.0	16.49	127.43	3,446	2,322.0	17.88	193.53	4,151

DATE: JULY 9.

Bread	1.4	1.5	162.0	2.26	2.43	453	209.0	2.92	3.13	585	278.0	3.9	4.17	778	100.0	1.4	1.5	280	160.0	2.24	2.4	448	186.0	2.6	2.79	521
Butter		84.0	44.0		36.96	344	42.0		35.28	328	95.0		79.8	741	63.0		52.92	492	58.0		48.72	453	44.0		36.96	344
Sugar			75.0			307	217.0			890	94.0			402	133.0			545	140.0			574	251.0			1,029
Milk	.54	3.5	750.0	4.05	26.25	503	750.0	4.05	26.25	503	1,000.0	5.4	35.0	670	1,000.0	5.4	35.0	670	500.0	2.70	17.5	335	500.0	2.70	17.5	335
Cream	.40	18.5	100.0	.4	18.5	201	100.0	.4	18.5	201	100.0	.4	18.5	201	100.0	.4	18.5	201	100.0	.4	18.5	201	100.0	.4	18.5	201
Meat, pot roast	4.6	14.5	76.0	3.7	11.02	191	88.0	4.05	12.76	222	90.0	4.14	13.05	227	88.0	4.05	12.76	222	91.0	4.19	13.19	229	88.5	4.07	12.83	223
Eggs	1.0	9.0	84.0	.84	7.56	92	110.0	1.1	9.9	120	91.0	.91	8.19	99					92.0	.92	8.28	100	98.0	.98	8.82	107
Potatoes, mashed	.33	2.55	240.0	.8	6.12	240	261.0	.87	6.65	261	255.0	.76	6.5	255					100.0	.33	2.55	100	239.0	.79	6.09	239
Baked beans	1.1	2.4	204.0	2.24	4.89	275	205.0	2.25	4.92	276	254.0	2.79	6.09	343	187.0	2.05	4.48	252	244.0	2.68	5.85	329	100.0	1.1	2.4	135
Turnips	.2		18.0			3	116.0	.22		22													61.0	.12		12
Cabbage	.24		52.0	.12		14	49.0	.12		13	59.0	.14		16					56.0	.13		15	49.0	.12		13
Rice	.27		52.0	.14		55	86.0	.23		90	102.0	.28		107	103.0	.28		108	102.0	.27		107	100.0	.27		105
Gravy	.7	4.0	57.0	.4	2.28	32	55.0	.38	2.2	31	53.0	.37	2.12	30	58.0	.4	2.32	33	63.0	.44	2.52	35	57.0	.38	2.28	32
Corn flakes	1.0		35.0	.35		128	40.0	.4		147	36.0	.36		132	40.0	.4		147	46.0	.46		169	41.0	.41		154
Cake	.87	12.75	50.0	.43	6.37	150	53.0	.46	6.75	159									49.0	.42	6.24	147				
Dates, sugared	.19		61.0	.11		216	120.0	.22		426	101.0	.2		358	118.0	.23		419	154.0	.29		547	113.0	.21		401
Coffee			250.0				250.0												170.0				250.0			
Tea																			250.0							
Total			2,060.0	15.84	122.38	3,204	2,501.0	17.67	126.84	4,274	2,608.0	19.65	173.42	4,359	1,990.0	14.61	127.48	3,367	1,955.0	15.46	125.75	3,789	2,028.0	14.15	108.17	3,851

DATE: JULY 10.

Bread	1.4	1.5	123.0	1.72	1.84		234.0	3.27	3.51		215.0	3.01	3.22		146.0	2.04	2.19		168.0	2.35	2.52		126.0	1.76	1.89	
Butter		84.0	45.0		37.8		69.0		57.96		98.0		82.32		64.0		53.76		61.0		51.24		60.0		50.4	
Sugar			54.0				161.0				37.0				134.0				185.0				121.0			
Milk	.52	3.50	750.0	3.9	26.25		445.0	2.31	15.57		750.0	3.9	26.25		1,000.0	5.2	35.0		215.0	1.11	7.52		250.0	1.3	8.75	
Cream	.4	18.5	100.0	.4	18.5		100.0	.4	18.5		100.0	.4	18.5		100.0	.4	18.5		100.0	.4	18.5		60.0	.24	11.1	
Meat, fresh pork	4.4	7.8	75.0	3.3	5.85		85.0	3.74	6.63		87.0	3.82	6.78		28.0	1.23	2.18		86.5	3.7	6.74		93.5	4.11	7.29	
Meat, veal pot roast	4.6	6.7	53.0	2.56	3.55		63.0	2.89	4.22		66.0	3.03	4.42		29.0	1.33	1.94						73.5	3.38	4.92	
Potatoes, boiled	.33		118.0	.39			219.0	.73			214.0	.71							80.0	.26			302.0	1.00		
Eggs	2.4	6.8	91.0	2.18	6.18		81.0	1.94	5.7		98.0	2.3	6.66		62.0	1.48	4.21		115.0	2.76	7.82		90.0	2.16	6.12	
Gravy	.57	9.4	71.0	.4	6.67		140.0	.79	13.16		147.0	.83	13.81		30.0	.17	2.82		144.0	.82	13.53		142.5	.8	13.39	
Soup	.56		200.0	1.12			200.0	1.12			200.0	1.12			140.0	.78			200.0	1.12			200.0	1.12		
Sliced tomatoes	.13		165.0	.21			268.0	.34			162.0	.21			139.0	.18			297.0	.39			189.0	.24		
Cake	1.0	12.9	45.0	.45	5.8		80.0	.8	10.32		40.0	.4	5.16		44.0	.44	5.67		72.0	.72	9.28		63.0	.63	8.12	
Corn flakes	1.0		42.0	.42			46.0	.46			39.0	.39			42.0	.42			44.0	.44			38.0	.38		
Apple sauce	.12		10.0				141.0	.16			111.0	.13			118.0	.14			153.0	.17			121.0	.14		
Figs	.7		14.0	.1			99.0	.7			110.0	.77			42.0	.29							101.0	.71		
Coffee			250.0				250.0												100.0							
Tea																			750.0				500.0			
Total			1,956.0	17.15	112.44		2,451.0	19.65	135.57		2,474.0	21.02	167.12		2,118.0	14.10	126.27		1,921.0	14.24	117.15		2,031.0	17.97	111.98	

Daily food chart—Continued.

DATE: JULY 11.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.4	1.5	194.0	2.61	2.91		205.0	2.87	3.07		195.0	2.73	2.92		70.0	0.98	1.05		227.0	3.17	3.4		211.0	2.95	3.16	
Butter		84.0	71.0		59.64		60.0		50.4		80.0		67.2		24.0		20.16		52.0		43.68		63.0		52.92	
Sugar			101.0				154.0				74.0				137.0				174.0				191.0			
Milk	.51	3.5	750.0	3.82	26.25		700.0	3.57	24.5		500.0	2.55	17.5		1,000.0	5.1	35.0		250.0	1.27	8.75		250.0	1.27	8.75	
Cream	.4	18.5	60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1	
Meat, roast veal	3.85	6.7	96.0	3.7	6.43		104.5	4.02	7.00		102.0	3.92	6.83		100.0	3.85	6.7		101.5	3.9	6.8		107.5	4.1	7.2	
Meat, roast beef	4.5	15.3	81.0	3.64	12.39		69.5	3.02	10.63		99.0	4.45	15.14		54.0	2.43	8.26		71.0	3.19	10.86		93.5	4.2	14.3	
Potatoes, boiled	.33		193.0	.62			233.0	.77			231.0	.76			79.0	.26			100.0	.33			195.0	.65		
Eggs	1.6	13.7	67.0	1.07	9.17		94.0	1.5	12.87		92.0	1.47	12.6						99.0	1.5	13.56		90.0	1.44	12.33	
Baked beans	1.1	2.4	78.0	.85	1.87		96.0	1.05	2.3		91.0	1.0	2.18						108.0	1.18	2.59		106.0	1.16	2.54	
Gravy	.4	.85	123.0	.49	1.04		130.0	.52	1.1		133.0	.53	1.13		129.0	.51	1.09		141.0	.56	1.19		128.0	.51	1.08	
Custard	1.2	2.2	63.0	.75	1.38		164.0	1.96	3.6		170.0	2.04	3.74		157.0	1.88	3.45		151.0	1.81	3.32		127.0	1.52	2.79	
Corn flakes	1.0		40.0	.4			39.0	.39			38.0	.38			35.0	.35			40.0	.4			36.0	.36		
Tomatoes	.14		97.0	.13			106.0	.14			119.0	.16							132.0	.18			87.0	.12		
Apple sauce	.1		10.0				87.0	.09			96.0	.09			99.0	.1							106.0	.1		
Coffee			250.0				250.0												190.0							
Tea			500.0				250.0				250.0								1,000.0				500.0			
Total			2,024.0	18.32	132.18		2,302.0	20.14	126.57		2,080.0	20.32	140.34		1,944.0	15.70	86.81		1,707.0	17.73	105.25		1,851.0	18.62	116.17	

DATE: JULY 12.

Bread	1.4	1.5	169.0	2.36	2.53	....	127.0	1.77	1.9	....	196.0	2.74	2.94	....	65.0	0.91	0.97	....	34.0	0.47	0.51	....	196.0	2.74	2.94	....
Butter	....	84.0	38.0	....	31.92	....	33.0	....	27.72	....	73.0	....	61.32	....	11.0	....	9.24	....	13.0	....	10.92	....	62.0	....	52.08	....
Sugar	....	....	114.0	....	....	....	159.0	....	....	....	126.0	....	....	....	165.0	....	....	....	136.0	....	....	....	74.0	....	....	....
Milk	.5	3.5	250.0	1.25	8.75	....	250.0	1.25	8.75	....	200.0	1.00	7.00	....	750.0	3.75	26.25	....	250.0	1.25	8.75	....	250.0	1.25	8.75	....
Cream	.4	18.5	100.0	.4	18.5	....	100.0	.4	18.5	....	100.0	.4	18.5	....	60.0	.24	11.1	....	100.0	.4	18.5	....	100.0	.4	18.5	....
Meat, roast beef	4.5	14.9	50.0	2.25	7.45	....	47.5	2.14	7.07	....	54.0	2.43	8.04	....	....	....	....	....	57.0	2.56	8.49	....	53.5	2.43	7.97	....
Meat, roast beef, cold	4.7	14.9	49.0	2.3	7.3	....	51.5	2.32	7.67	....	44.0	2.06	6.55	....	55.0	2.55	8.19	....	62.0	2.91	9.23	....	58.5	2.62	8.71	....
Potatoes, boiled	.33	....	209.0	.69	....	....	188.0	.62	....	....	94.0	.31	....	....	....	....	....	....	186.0	.62	....	....	186.0	.62	....	....
Eggs	2.0	16.65	9.0	.18	1.49	....	51.0	1.02	8.49	....	52.0	1.04	8.65	....	....	....	....	....	....	....	....	....	48.0	.96	7.99	....
Rice pudding	.1	1.0	92.0	.09	.92	....	96.0	.1	.96	....	104.0	.1	1.04	....	....	....	....	....	107.0	.1	1.07	....	104.0	.1	1.04	....
Cabbage	.2	....	30.0	.06	....	....	50.0	.1	....	....	38.0	.07	....	....	41.0	.08	....	....	48.0	.09	....	....	44.0	.08	....	....
Turnips	.1	....	85.0	.09	....	....	90.0	.09	....	....	85.0	.09	....	....	....	....	....	....	....	....	....	....	84.0	.08	....	....
Gravy	.57	14.4	86.0	.49	12.38	....	117.0	.66	16.78	....	56.0	.31	8.06	....	56.0	.31	8.06	....	110.0	.62	15.84	....	110.0	.62	15.84	....
Lemon pudding	.35	2.2	99.0	.34	2.18	....	97.0	.33	2.13	....	110.0	.38	2.43	....	105.0	.36	2.31	....	102.0	.35	2.24	....	101.0	.35	2.22	....
Bananas	.1	....	155.0	.15	....	....	173.0	.17	....	....	193.0	.19	....	....	165.0	.17	....	....	177.0	.18	....	....	185.0	.19	....	....
Corn flakes	1.0	....	31.0	.31	....	....	33.0	.33	....	....	32.0	.32	....	....	35.0	.35	....	....	44.0	.44	....	....	40.0	.4	....	....
Coffee	....	....	250.0	....	....	....	250.0	....	....	....	250.0	....	....	....	....	....	....	....	190.0	....	....	....	250.0	....	....	....
Tea	....	....	250.0	....	....	....	500.0	....	....	....	250.0	....	....	....	....	....	....	....	650.0	....	....	....	500.0	....	....	....
Total	....	....	1,566.0	10.96	93.42	....	1,663.0	11.30	99.97	....	1,557.0	11.44	124.53	....	1,508.0	8.72	66.12	....	1,426.0	9.99	75.55	....	1,696.0	12.84	126.04	....

DATE: JULY 13.

Bread	1.5	1.5	89.0	1.33	1.33	249	215.0	3.22	3.22	602	184.0	2.76	2.76	515	8.0	0.12	.12	22	91.0	1.36	1.36	255	200.0	3.00	3.00	560
Butter	....	84.0	32.0	....	26.88	250	77.0	....	64.68	601	101.0	....	84.84	789	7.0	....	5.88	55	43.0	....	36.12	336	78.0	....	65.52	609
Sugar	....	....	117.0	....	....	480	168.0	....	....	689	120.0	....	....	492	143.0	....	....	586	174.0	....	....	713	182.0	....	....	746
Milk	.49	3.5	250.0	1.22	8.75	168	250.0	1.22	8.75	168	250.0	1.22	8.75	168	634.0	3.1	22.19	425	250.0	1.22	8.75	168	250.0	1.22	8.75	168
Cream	.4	18.5	120.0	.48	22.2	241	120.0	.48	22.2	241	120.0	.48	22.2	241	120.0	.48	22.2	241	120.0	.48	22.2	241	120.0	.48	22.2	241
Meat, roast beef hash	2.0	9.85	79.0	1.58	7.78	129	78.5	1.57	7.73	128	83.0	1.66	8.17	135	78.0	1.56	7.68	127	82.0	1.64	8.07	133	76.5	1.53	7.51	125
Meat, fresh ham	4.0	12.3	75.0	3.0	9.22	163	76.0	3.04	9.34	165	81.0	3.24	9.96	176	41.0	1.64	5.04	89	75.0	3.00	9.22	163	78.0	3.12	9.59	169
Potatoes, boiled	.33	....	178.0	.58	....	178	170.0	.56	....	170	195.0	.64	....	195	....	....	....	....	150.0	.49	....	150	171.0	.56	....	171
Turnips	.2	....	45.0	.09	....	17	63.0	.12	....	24	70.0	.14	....	27	52.0	.1	....	20	53.0	.1	....	20	61.0	.12	....	23
Corn flakes	1.0	....	14.0	.14	....	51	33.0	.33	....	121	42.0	.42	....	154	40.0	.4	....	147	44.0	.44	....	161	39.0	.39	....	143
Gelatin	.39	....	40.0	.16	....	5	248.0	.96	....	32	138.0	.53	....	18	114.0	.44	....	15	271.0	1.05	....	36	132.0	.51	....	17
Tomatoes	.13	....	76.0	.09	....	17	90.0	.11	....	21	90.0	.11	....	21	....	....	....	....	100.0	.13	....	23	92.0	.11	....	21
Bananas	.12	....	162.0	.19	....	151	135.0	.16	....	126	150.0	.18	....	140	168.0	.2	....	156	155.0	.18	....	144	138.0	.16	....	128
Coffee	....	....	250.0	....	....	....	250.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Tea	....	....	170.0	....	....	....	250.0	....	....	....	500.0	....	....	....	....	....	....	....	500.0	....	....	....	250.0	....	....	....
Total	....	....	1,277.0	8.86	76.16	2,099	1,723.5	11.77	115.92	3,088	1,624.0	11.38	136.68	3,071	1,405.0	8.04	63.11	1,883	1,608.0	10.09	85.72	2,543	1,617.5	11.20	116.57	3,121

Daily food chart—Continued.

DATE: JULY 14.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Subject I Nitrogen.	Subject I Ether extract.	Subject I Estimated fuel value.	Subject II (W. W. C.) Amount of food.	Subject II Nitrogen.	Subject II Ether extract.	Subject II Estimated fuel value.	Subject III (A. G.) Amount of food.	Subject III Nitrogen.	Subject III Ether extract.	Subject III Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	112.0	1.68	1.68	.....	182.0	2.73	2.73	.....	151.0	2.26	2.26	.....
Butter	.....	84.0	32.0	.....	26.88	.....	50.0	.....	42.0	.....	83.0	.....	69.72	.....
Sugar	.....	.....	67.0	.....	.....	.....	140.0	.....	.....	.....	92.0	.....	.....	.....
Milk	.48	3.5	500.0	2.4	17.5	.....	650.0	3.12	22.75	.....	500.0	2.4	17.5	.....
Cream	.39	18.5	160.0	.62	29.6	.....	160.0	.62	29.6	.....	120.0	.46	22.2	.....
Meat, leg of lamb	3.1	7.0	143.0	4.43	10.01	.....	158.0	4.89	11.06	.....	194.0	6.01	13.58	.....
Potatoes, boiled	.33	.....	183.0	.6	.....	.....	207.0	.68	.....	.....	149.0	.49	.....	.....
Gravy	.42	5.2	56.0	.23	2.91	.....	66.0	.27	3.43	.....	65.0	.27	3.38	.....
Custard	.93	5.5	56.0	.52	3.08	.....	116.0	1.07	6.38	.....	161.0	1.49	8.85	.....
Cake	.62	10.5	64.0	.39	6.72	.....	100.0	.62	10.5	.....	94.0	.58	9.87	.....
Malta vita	1.14	.....	17.0	.19	.....	.....	62.0	.7	.....	.....	56.0	.63	.....	.....
Tomatoes	.13	.....	162.0	.21	.....	.....	211.0	.27	.....	.....	100.0	.2	.....	.....
Bananas	.12	.....	200.0	.24	.....	.....	189.0	.22	.....	.....	223.0	.26	.....	.....
Coffee	.....	.....	500.0	.....	.....	.....	250.0	.....	.....	.....	.....	.....	.....	.....
Tea	.....	.....	.....	.....	.....	.....	250.0	.....	.....	.....	250.0	.....	.....	.....
Total	.....	.....	1,752.0	11.51	98.38	.....	2,291.0	15.19	128.45	.....	2,048.0	15.05	147.36	.....

Kind of food.	Subject IV (O. F. L.) Amount of food.	Subject IV Nitrogen.	Subject IV Ether extract.	Subject IV Estimated fuel value.	Subject V (A. M. N.) Amount of food.	Subject V Nitrogen.	Subject V Ether extract.	Subject V Estimated fuel value.	Subject VI (C. H. S.) Amount of food.	Subject VI Nitrogen.	Subject VI Ether extract.	Subject VI Estimated fuel value.
	Gms.	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	60.0	0.9	0.9	.....	30.0	0.45	0.45	.....	141.0	2.11	2.11	.....
Butter	15.0	.....	12.6	.....	23.0	.....	19.32	.....	41.0	.....	34.44	.....
Sugar	147.0	.....	.....	.....	165.0	.....	.....	.....	151.0	.....	.....	.....
Milk	1,250.0	6.0	43.75	.....	250.0	1.2	8.75	.....	250.0	1.2	8.75	.....
Cream	120.0	.46	22.2	.....	140.0	.54	25.9	.....	120.0	.46	22.2	.....
Meat, leg of lamb	156.0	4.83	10.92	.....	164.0	5.08	11.48	.....	162.0	5.01	11.34	.....
Potatoes, boiled	.....	.....	.....	.....	187.0	.61	.....	.....	161.0	.53	.....	.....
Gravy	63.0	.26	3.27	.....	65.0	.27	3.38	.....	69.0	.28	3.58	.....
Custard	148.0	1.37	8.14	.....	150.0	1.39	8.25	.....	128.0	1.19	7.04	.....
Cake	95.0	.58	9.97	.....	137.0	.84	14.38	.....	109.0	.67	11.44	.....
Malta vita	36.0	.41	.....	.....	57.0	.64	.....	.....	62.0	.7	.....	.....
Tomatoes	155.0	.2	.....	.....	243.0	.31	.....	.....	76.0	.09	.....	.....
Bananas	149.0	.17	.....	.....	213.0	.25	.....	.....	203.0	.24	.....	.....
Coffee	.....	.....	.....	.....	190.0	.....	.....	.....	.....	.....	.....	.....
Tea	.....	.....	.....	.....	500.0	.....	.....	.....	500.0	.....	.....	.....
Total	2,394.0	15.18	111.75	.....	1,824.0	11.58	91.91	.....	1,673.0	12.48	100.90	.....

DATE: JULY 15.

Bread	1.7	1.5	239.0	4.06	3.58		245.0	4.16	3.67		236.0	4.01	3.54		108.0	1.83	1.62		190.0	3.23	2.75		180.0	3.06	2.7	
Butter		84.0	67.0		56.28		65.0		54.6		114.0		95.76		37.0		31.08		80.0		67.2		80.0		67.2	
Sugar			102.0				235.0				96.0				197.0				200.0				138.0			
Milk	.5	3.5	630.0	3.15	22.05		250.0	1.25	8.75		500.0	2.5	17.5		750.0	3.75	26.25		440.0	2.2	15.4		250.0	1.25	8.75	
Cream	.4	18.5	60.0	.24	11.1		60.0	.24	11.1						60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1	
Meat, potted beef	4.9	9.7	61.0	2.98	5.91		68.0	3.33	6.59		76.0	3.72	7.37		62.0	3.03	6.01		65.0	3.18	6.3		67.0	3.28	6.49	
Eggs	1.3	6.9	71.0	.92	4.89		80.0	1.04	5.52		75.0	.97	5.17						90.0	1.17	6.21		82.0	1.06	5.65	
Potatoes, boiled	.2		162.0	.32			151.0	.3			152.0	.3							138.0	.27			165.0	.33		
Baked beans	1.4	1.5	264.0	3.69	3.96		250.0	3.5	3.75		156.0	2.18	2.34						124.0	1.73	1.86		183.0	2.56	2.74	
Gravy	.42	3.8	51.0	.21	1.93		51.0	.21	1.93		55.0	.23	2.09		43.0	.18	1.63		78.0	.32	2.96		67.0	.28	2.54	
Malta vita	1.14		27.0	.3			46.0	.52			41.0	.46			41.0	.46			43.0	.49			45.0	.51		
Cake	.93	18.3	53.0	.49	9.69		104.0	.96	19.03		48.0	.44	8.78						57.0	.53	10.43		79.0	.73	14.45	
Tomatoes	.13		114.0	.14			196.0	.25			192.0	.24			81.0	.1			250.0	.32			171.0	.22		
Oranges	.10		145.0	.15			155.0	.16			69.0	.07			171.0	.17			204.0	.20			152.0	.15		
Prunes	.12		117.0	.14			112.0	.13			107.0	.12			96.0	.11			122.0	.14			114.0	.13		
Coffee			250.0				250.0												190.0							
Tea							250.0				250.0												250.0			
Total			2,163.0	16.79	119.39		2,068.0	16.05	114.94		1,917.0	15.24	142.55		1,646.0	9.87	77.69		2,141.0	14.02	124.21		1,833.0	13.80	121.62	

DATE: JULY 16.

Bread	1.4	1.5	218.0	3.05	3.27		256.0	3.58	3.84		265.0	3.71	3.97		87.0	1.21	1.3		111.0	1.55	1.66		180.0	2.52	2.7	
Butter		84.0	68.0		57.12		66.0		55.44		114.0		95.76		22.0		18.48		39.0		32.76		61.0		51.24	
Sugar			88.0				207.0				83.0				113.0				240.0				160.0			
Milk	.5	3.5	1,250.0	6.25	43.75		300.0	1.5	10.5		250.0	1.25	8.75		1,250.0	6.25	43.75		250.0	1.25	8.75		250.0	1.25	8.75	
Cream	.4	18.5	110.0	.44	20.35		110.0	.44	20.35		110.0	.44	20.35		110.0	.44	20.35		110.0	.44	20.35		92.0	.36	17.02	
Meat, roast veal	5.5	2.0	101.0	5.55	2.02		111.0	6.1	2.22		197.0	10.72	3.94		178.0	9.79	3.56		147.0	8.63	2.94		138.0	7.52	2.76	
Eggs	1.7	11.2	45.0	.76	5.04		50.0	.85	5.6		53.0	.9	5.93						65.0	1.1	7.28		58.0	.98	6.49	
Potatoes, boiled	.33		163.0	.54			164.0	.54			171.0	.57							103.0	.33			161.0	.53		
Rice	.25		85.0	.21			227.0	.56			90.0	.23			91.0	.23			86.0	.21			89.0	.22		
Baked beans	1.4	2.0	104.0	1.45	2.08		116.0	1.62	2.32		121.0	1.69	2.42						111.0	1.55	2.22		99.0	1.3	1.98	
Gravy	.45	1.0	129.0	.57	1.29		142.0	.63	1.42		125.0	.56	1.25		187.0	.84	1.87		128.0	.57	1.28		122.0	.54	1.22	
Malta vita	1.14		16.0	.18			42.0	.47			35.0	.4			34.0	.38			39.0	.44			38.0	.43		
Tomatoes	.13		125.0	.16			122.0	.15			103.0	.13							156.0	.18			99.0	.12		
Oranges	.10		94.0	.09			94.0	.09			89.0	.09			97.0	.10			95.0	.10			98.0	.10		
Jelly	.31		63.0	.19			160.0	.49			171.0	.53			158.0	.48			181.0	.56			191.0	.58		
Cake	.9	18.3					88.0	.8	16.1										51.0	.45	9.33		59.0	.46	10.8	
Coffee							250.0												190.0				175.0			
Tea							1,000.0				500.0								870.0				500.0			
Total			2,659.0	19.44	134.92		2,255.0	17.82	117.79		1,977.0	21.22	142.37		2,327.0	19.72	89.31		1,912.0	17.36	86.57		1,895.0	16.91	102.96	

Daily food chart—Continued.

DATE: JULY 17.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject III (A. G.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject V (A. M. N.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.7	1.5	200.0	3.4	3.0	560	266.0	4.52	3.99	745	204.0	3.46	3.06	571	68.0	1.15	1.02	190	99.0	1.68	1.48	277	168.0	2.85	2.52	470
Butter	.....	84.0	56.0	.....	47.04	437	80.0	.....	67.2	625	107.0	.....	89.88	836	35.0	.....	29.4	273	64.0	.....	53.76	500	51.0	.....	42.84	398
Sugar	.....	.....	88.0	.....	......	361	171.0	.....	......	701	81.0	.....	......	332	222.0	.....	......	910	156.0	.....	......	640	140.0	.....	......	574
Milk	.5	3.5	1,000.0	5.0	35.0	670	250.0	1.25	8.75	168	500.0	2.5	17.5	335	1,500.0	7.5	52.5	1,005	450.0	2.25	15.75	302	250.0	1.25	8.75	168
Cream	.4	18.5	110.0	.44	20.35	221	110.0	.44	20.35	221	110.0	.44	20.35	221	110.0	.44	20.35	221	110.0	.44	20.35	221	110.0	.44	20.35	221
Meat, roast beef hash	2.9	1.4	266.0	7.71	3.72	287	253.0	7.33	3.53	273	319.0	9.25	4.46	345	210.0	6.09	2.93	227	189.0	5.48	2.63	204	297.0	8.61	4.15	321
Potatoes, boiled	.33	.....	168.0	.56	......	168	141.0	.47	......	141	233.0	.77	......	233	......	.....	......	.....	139.0	.46	......	139	194.0	.64	......	194
Baked beans	1.3	2.0	66.0	.85	1.32	89	70.0	.91	1.4	95	94.0	1.12	1.88	127	34.0	.44	.68	46	67.0	.87	1.34	90	83.0	1.07	1.66	112
Malta vita	1.14	.....	28.0	.31	......	99	38.0	.43	......	134	37.0	.42	......	131	32.0	.36	......	113	35.0	.4	......	124	33.0	.37	......	117
Chocolate jelly	.44	.....	53.0	.23	......	7	269.0	1.18	......	35	255.0	1.12	......	33	235.0	1.03	......	31	295.0	1.29	......	38	275.0	1.21	......	36
Tomatoes	.13	.....	105.0	.13	......	23	109.0	.14	......	25	125.0	.16	......	29	130.0	.16	......	30	132.0	.17	......	30	120.0	.15	......	28
Bananas	.2	.....	164.0	.32	......	153	204.0	.4	......	190	176.0	.35	......	164	175.0	.35	......	163	173.0	.34	......	161	166.0	.33	......	154
Coffee	.....	.....	250.0	.....	......	.....	250.0	.....	......	.....	......	.....	......	.....	......	.....	......	.....	210.0	.....	......	.....	250.0	.....	......	.....
Tea	.....	.....	......	.....	......	.....	500.0	.....	......	.....	500.0	.....	......	.....	......	.....	......	.....	250.0	.....	......	.....	500.0	.....	......	.....
Total	.....	.....	2,304.0	18.95	110.43	3,075	1,961.0	17.07	105.22	3,353	2,241.0	19.59	137.15	3,357	2,751.0	17.52	106.88	3,209	1,909.0	13.38	95.31	2,726	1,887.0	16.92	80.27	2,793

DATE: JULY 18.

Bread	1.8	1.5	168.0	3.02	2.52	280.0	5.04	4.2	237.0	4.26	3.55	76.0	1.36	1.14	168.0	3.02	2.52	257.0	4.62	3.85
Butter		84.0	40.0		33.6	48.0		40.32	123.0		103.32	49.0		41.16	42.0		35.28	63.0		52.92
Sugar			109.0			80.0			110.0			171.0			206.0			180.0		
Milk	.5	3.5	750.0	3.75	26.25	750.0	3.75	26.25	500.0	2.5	17.5	750.0	3.75	26.25	166.0	.83	5.81			
Cream	.4	18.5	110.0	.44	20.35	110.0	.44	20.35	50.0	.2	9.25	170.0	.68	31.45	110.0	.44	20.35	50.0	.2	9.25
Meat, veal loaf	2.7	8.0	140.0	3.78	11.2	130.0	3.51	10.4	142.0	3.83	11.36	122.0	3.29	9.76	147.0	3.96	11.76	132.0	3.56	10.56
Eggs	1.8	12.7	72.0	1.29	9.14	71.0	1.27	9.01	81.0	1.45	10.28				75.0	1.35	9.52	86.0	1.54	10.92
Potatoes, boiled	.33		179.0	.59		82.0	.27		214.0	.71					116.0	.38		203.0	.67	
Baked beans	1.3	4.3	185.0	2.4	7.95	190.0	2.47	8.17	220.0	2.86	9.46	115.0	1.49	4.94	174.0	2.26	7.48	156.0	2.02	6.7
Rice	.25		48.0	.12		107.0	.26		114.0	.28		104.0	.26		117.0	.29		120.0	.3	
Turnips	.1		44.0			78.0	.08		77.0	.08					73.0	.07		78.0	.08	
Gravy	.24	3.8	48.0	.12	1.82	65.0	.15	2.47	69.0	.16	2.62	69.0	.16	2.62	67.0	.16	2.54	64.0	.16	2.43
Malta vita	1.14		27.0	.3		52.0	.59		40.0	.45		31.0	.35		33.0	.37		40.0	.45	
Tomatoes	.13		77.0	.1		122.0	.15		103.0	.13		115.0	.15		120.0	.15		124.0	.16	
Oranges	.10		128.0	.13		124.0	.12		143.0	.14		137.0	.14		142.0	.14		118.0	.12	
Watermelon	.06														269.0	.16				
Coffee						250.0									200.0			240.0		
Tea									500.0						500.0			500.0		
Total			2,125.0	16.04	112.83	2,289.0	18.10	121.17	2,223.0	17.05	167.34	1,909.0	11.63	117.32	2,025.0	13.58	95.26	1,671.0	13.88	96.63

DATE: JULY 19.

Bread	1.7	1.5	71.0	1.2	1.06	89.0	1.51	1.33	144.0	2.44	2.16	35.0	0.59	0.52	68.0	1.15	1.02	108.0	1.83	1.62
Butter		84.0	31.0		26.04	12.0		10.08	107.0		89.88	89.0		74.76	49.0		41.16	53.0		44.52
Sugar			56.0			110.0			108.0			119.0			130.0			160.0		
Milk	.5	3.5	250.0	1.25	8.75	590.0	2.95	20.65	610.0	3.05	21.35	680.0	3.4	23.8	160.0	.8	5.6	250.0	1.25	8.75
Cream	.4	18.5	110.0	.44	20.35	110.0	.44	20.35	110.0	.44	20.35	110.0	.44	20.35	110.0	.44	20.35	110.0	.44	20.35
Meat, chicken	3.5	13.4	83.0	2.9	11.12	86.0	3.01	11.52	82.0	2.87	10.98	82.0	2.87	10.98	86.0	3.01	11.52	88.0	3.08	11.79
Meat, cold roast beef	5.4	12.0	62.0	3.34	7.44	67.0	3.61	8.04	77.0	4.15	9.24	74.0	4.0	8.88	61.0	3.25	7.32	65.0	3.51	7.8
Potatoes, boiled	.33		217.0	.72		87.0	.28		93.0	.31					165.0	.55		176.0	.58	
Eggs	2.5	19.5	49.0	1.22	9.55	75.0	1.87	14.62	83.0	2.07	16.18				78.0	1.95	15.21	75.0	1.87	14.62
Baked beans	1.3	4.0	122.0	1.58	4.88	120.0	1.56	4.80	114.0	1.48	4.56				123.0	1.59	4.92	111.0	1.44	4.44
Gravy	.26	1.1	13.0		.14	82.0	.21	.9	82.0	.21	.9	88.0	.22	.96	93.0	.22	1.02	88.0	.22	.96
Malta vita	1.14		26.0	.29		35.0	.4		29.0	.33		18.0	.2		33.0	.37		38.0	.44	
Coffee jelly	.3		21.0	.06		140.0	.42		152.0	.45		120.0	.36		160.0	.48		124.0	.37	
Cabbage	.29		12.0			53.0	.15		56.0	.15					46.0	.13		53.0	.15	
Bananas	.2		127.0	.24		144.0	.29		142.0	.28		126.0	.24		113.0	.22		118.0	.22	
Watermelon	.06		243.0	.15		656.0	.39		258.0	.15		408.0	.24					273.0	.16	
Coffee			250.0			250.0									150.0			200.0		
Tea															180.0			180.0		
Total			1,493.0	13.39	89.33	2,456.0	17.09	92.29	2,247.0	18.38	175.60	1,949.0	12.56	140.25	1,475.0	14.16	108.12	1,890.0	15.56	114.85

Daily food chart—Continued.

DATE: JULY 20.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.7	1.5	109.0	1.85	1.63	305	224.0	3.8	3.36	627	216.0	3.67	3.24	605	76.0	1.29	1.14	213	105.0	1.78	1.57	294	193.0	3.28	2.89	540
Butter		84.0	31.0		26.04	242	58.0		48.72	453	100.0		84.0	781	42.0		35.28	328	46.0		38.64	359	56.0		47.04	437
Sugar			63.0			258	163.0			668	92.0			377	105.0			431	137.0			562	170.0			697
Milk	.51	3.5	440.0	2.2	15.4	295	310.0	1.58	10.85	208	210.0	1.05	7.35	141	440.0	2.2	15.4	305	440.0	2.2	15.4	305	260.0	1.3	9.1	174
Cream	.4	18.5	145.0	.6	26.82	291	110.0	.44	20.35	221	110.0	.44	20.35	221	65.0	.26	12.02	131	140.0	.56	25.9	281	110.0	.44	20.35	221
Meat, roast beef hash	2.5	14.1	196.0	4.9	27.63	543	204.0	5.1	28.76	565	211.0	5.27	29.75	584	194.0	4.85	27.35	537	213.0	5.32	30.03	590	198.0	4.95	27.91	548
Eggs	1.5	10.6	13.0	.19	1.37	18	112.0	1.68	11.87	153	89.0	1.33	9.43	122					104.0	1.56	11.02	142	97.0	1.45	10.57	133
Potatoes, boiled	.33		185.0	.61		185	219.0	.73		219	197.0	.65		197					184.0	.61		184	229.0	.76		229
Baked beans	1.3	2.4	108.0	1.4	2.59	146	109.0	1.41	2.61	147	132.0	1.71	3.16	178	52.0	.67	1.24	70	109.0	1.41	2.61	147	136.0	1.76	3.26	184
Lima beans	.98		12.0	.11		10	122.0	1.19		101	122.0	1.19		101									98.0	.96		81
Gravy	.31	10.0	78.0	.24	7.8	79	125.0	.39	12.5	126	120.0	.37	12.0	121	116.0	.35	11.6	117	124.0	.38	12.4	125	121.0	.37	12.1	122
Malta vita	1.14						48.0	.54		170	37.0	.42		131	33.0	.37		117	44.0	.5		126	38.0	.43		135
Coffee jelly	.3						166.0	.49		22	93.0	.28		12	97.0	.29		13	220.0	.66		29	86.0	.25		11
Peaches	.15		149.0	.22		140	169.0	.25		159	173.0	.26		163	165.0	.25		155	148.0	.22		139	185.0	.27		174
Watermelon	.06		511.0	.3		158	564.0	.34		175	579.0	.35		180	500.0	.3		155	420.0	.25		130	601.0	.36		186
Coffee			440.0				440.0												170.0				170.0			
Ice tea							230.0				460.0								230.0				460.0			
Total			2,040.0	12.62	109.28	2,670	2,703.0	17.94	139.02	4,005	2,518.0	16.99	169.28	3,914	1,885.0	10.83	104.03	2,572	2,434.0	15.45	137.57	3,413	2,578.0	16.58	133.22	3,872

DATE: JULY 21.

Bread	1.8	1.5	96.0	1.72	1.44		168.0	2.85	2.52		185.0	3.14	2.77		52.0	0.88	0.78		181.0	3.07	2.71		193.0	3.28	2.89	
Butter		84.0	29.0		24.36		41.0		34.44		72.0		61.32		16.0		13.44		69.0		57.96		70.0		58.8	
Sugar			80.0				186.0				106.0				114.0				214.0				156.0			
Milk	.5	3.5	860.0	4.3	30.1		130.0	.65	4.55		460.0	2.3	16.1		960.0	4.8	33.6		210.0	1.05	7.35		210.0	1.05	7.35	
Cream	.4	18.5	100.0	.4	18.5		100.0	.4	18.5		110.0	.44	20.35		100.0	.4	18.5		100.0	.4	18.5		60.0	.24	11.1	
Meat, roast beef	3.9	5.9	114.0	4.44	6.72		110.0	4.29	6.49		131.0	5.1	7.72		123.0	4.79	7.25		118.0	4.6	6.96		127.0	4.95	7.49	
Eggs	1.7	11.1					106.0	1.8	11.76		79.0	1.34	8.76										77.0	1.30	8.54	
Potatoes, boiled	.33		198.0	.66			218.0	.72			243.0	.74							181.0	.59			252.0	.84		
Lima beans	1.0		7.0	.07			115.0	1.15			86.0	.86							103.0	1.03			100.0	1.0		
Gravy	.42	3.1	91.0	.38	2.82		110.0	.46	3.41		124.0	.52	3.84		111.0	.46	3.44		144.0	.6	4.46		180.0	.75	5.58	
Malta Vita	1.14		22.0	.35			40.0	.45			30.0	.34			30.0	.34			33.0	.37			36.0	.41		
Pudding	.27	1.0	43.0	.11	.43		145.0	.39	1.45		146.0	.39	1.46		45.0	.12	.45		150.0	.4	1.5		140.0	.37	1.4	
Tomatoes	.13		80.0	.1			92.0	.11			128.0	.16			81.0	.1			125.0	.16			105.0	.13		
Bananas	.12		166.0	.19			198.0	.23			173.0	.2			182.0	.21			177.0	.21			162.0	.19		
Coffee			210.0				210.0												170.0				170.0			
Ice tea							440.0				440.0								440.0				440.0			
Total			1,886.0	12.72	84.37		1,759.0	13.50	83.12		2,073.0	15.53	122.32		1,814.0	12.10	77.46		1,805.0	12.48	99.44		1,868.0	14.60	103.15	

DATE: JULY 22.

Bread	1.6	1.5	139.0	2.22	2.08		261.0	4.17	3.91		250.0	4.0	3.75		130.0	2.08	1.95		165.0	2.64	2.47		198.0	3.16	2.97	
Butter		84.0	47.0		39.48		63.0		52.92		107.0		89.88						73.0		61.32		74.0		62.16	
Sugar			49.0				145.0				89.0								155.0				133.0			
Milk	.5	3.5	600.0	3.0	21.0		210.0	1.05	7.35		460.0	2.3	16.1						210.0	1.05	7.35		210.0	1.05	7.35	
Cream	.4	18.5	160.0	.64	29.6		160.0	.64	29.6		160.0	.64	29.6						160.0	.64	29.6		110.0	.44	20.35	
Meat, fresh pork	4.0	15.7	73.0	2.92	11.46		114.0	4.56	17.89		80.0	3.2	12.56						85.0	3.4	13.34		75.0	3.0	11.77	
Eggs	2.1	10.0													11.0	.21	1.1									
Potatoes, mashed	.4	2.1	201.0	.8	4.22		116.0	.46	2.43		121.0	.48	2.54						91.0	.36	1.91		202.0	.8	4.24	
Roast beef	3.9	15.7													114.0	4.44	17.89									
Baked beans	1.3	1.6	304.0	3.95	4.86		289.0	3.75	4.62		356.0	4.62	5.69						178.0	2.31	2.84		127.0	1.65	2.03	
Gravy	.36	10.0	52.0	.18	5.2		58.0	.2	5.8		59.0	.21	5.9						77.0	.27	7.7		70.0	.25	7.0	
Boiled onions	.1		42.0				73.0	.07			80.0	.08							87.0	.09			109.0	.1		
Cabbage	.24		27.0	.06			45.0	.1			44.0	.1							76.0	.18			58.0	.13		
Corn flakes	1.0		31.0	.31			46.0	.46			45.0	.45							46.0	.46			38.0	.38		
Chocolatepudding	.66	1.2	38.0	.25	.46		157.0	1.14	1.88		176.0	1.17	2.11						177.0	1.17	2.12		151.0	1.0	1.81	
Chocolate cake	1.0	14.4	39.0	.39	5.61		83.0	.83	11.95										100.0	1.0	14.4		92.0	.92	13.24	
Apple sauce	.13						123.0	.15			115.0	.14							130.0	.16			145.0	.18		
Peaches	.13		108.0	.13			93.0	.12			98.0	.13							102.0	.13			92.0	.11		
Coffee			210.0				210.0												170.0							
Ice tea							630.0				420.0								800.0				420.0			
Total			1,910.0	14.85	123.97		2,036.0	17.70	138.35		2,140.0	17.52	168.13		255.0	6.73	20.94		1,912.0	13.86	143.05		1,884.0	13.17	132.92	

Daily food chart—Continued.

DATE: JULY 23.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Subject I Nitrogen.	Subject I Ether extract.	Subject I Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Subject II Nitrogen.	Subject II Ether extract.	Subject II Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	165.0	2.47	2.47	462	241.0	3.61	3.61	675
Butter		84.0	61.0		51.24	476	59.0		49.56	468
Sugar			66.0			271	138.0			566
Milk	.5	3.5	960.0	4.8	33.6	643	320.0	1.6	11.2	214
Cream	.4	18.5	60.0	.24	11.1	121	60.0	.24	11.1	121
Meat, fresh pork	4.2	14.2	48.0	2.01	6.81	115	50.0	2.1	7.1	120
Meat, veal loaf	2.5	8.6	115.0	2.87	9.89	166	64.0	1.6	5.5	92
Potatoes, boiled	.33		261.0	.87		261	255.0	.85		255
Eggs	1.3	8.2	77.0	1.0	6.31	77	59.0	.76	4.83	59
Turnips	.20						144.0	.28		27
Gravy	.5	13.0	111.0	.55	14.43	149	115.0	.57	14.95	154
Corn flakes	1.0		24.0	.24		88	39.0	.39		143
Lemon pudding	.22	1.2	104.0	.22	1.24	106	130.0	.28	1.56	133
Lemon jelly	.31		85.0	.26		11	100.0	.31		13
Tomatoes	.13		127.0	.16		29	134.0	.17		31
Bananas	.12		121.0	.14		113	125.0	.15		116
Coffee										
Ice tea							420.0			
Total			2,385.0	15.83	137.09	3,038	2,033.0	12.91	109.41	3,187

Kind of food.	Subject III (A. G.). Amount of food.	Subject III Nitrogen.	Subject III Ether extract.	Subject III Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Subject IV Nitrogen.	Subject IV Ether extract.	Subject IV Estimated fuel value.
	Gms.	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	168.0	2.52	2.52	470	156.0	2.34	2.34	437
Butter	92.0		77.28	719	53.0		44.52	414
Sugar	77.0			316	116.0			476
Milk	460.0	2.3	16.1	308	710.0	3.55	24.85	476
Cream					60.0	.24	11.1	121
Meat, fresh pork	51.0	2.14	7.24	122	53.0	2.22	7.52	127
Meat, veal loaf	73.0	1.82	6.27	105	75.0	1.87	6.45	108
Potatoes, boiled	229.0	.76		229				
Eggs	73.0	.94	5.98	73				
Turnips								
Gravy	121.0	.6	15.73	162	114.0	.57	14.82	153
Corn flakes	39.0	.39		143	39.0	.39		143
Lemon pudding	92.0	.22	1.1	94	118.0	.25	1.41	120
Lemon jelly	112.0	.34		15	38.0	.11		5
Tomatoes	114.0	.14		26	121.0	.15		28
Bananas	151.0	.18		140	152.0	.18		141
Coffee								
Ice tea	420.0							
Total	1,852.0	12.35	132.22	2,922	1,805.0	11.87	113.01	2,749

Kind of food.	Subject V (A. M. N.). Amount of food.	Subject V Nitrogen.	Subject V Ether extract.	Subject V Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Subject VI Nitrogen.	Subject VI Ether extract.	Subject VI Estimated fuel value.
	Gms.	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	162.0	2.43	2.43	454	251.0	3.76	3.76	703
Butter	33.0		27.72	258	65.0		54.6	508
Sugar	114.0			467	153.0			627
Milk	210.0	1.05	7.35	141	210.0	1.05	7.35	141
Cream	60.0	.24	11.1	121	110.0	.44	20.35	221
Meat, fresh pork	65.0	2.73	9.23	156	55.0	2.31	7.81	132
Meat, veal loaf	66.0	1.65	5.67	95	127.0	3.17	10.92	183
Potatoes, boiled	182.0	.6		182	198.0	.66		198
Eggs					60.0	.78	4.92	60
Turnips	66.0	.13		13	82.0	.16		16
Gravy	179.0	0.89	23.27	240	120.0	.6	15.6	161
Corn flakes	42.0	.42		154	42.0	.42		154
Lemon pudding	137.0	.3	1.64	140	89.0	.19	1.06	91
Lemon jelly	115.0	.35		15	104.0	.32		15
Tomatoes	132.0	.17		30	129.0	.61		30
Bananas	170.0	.2		158	167.0	.34		155
Coffee					210.0			
Ice tea	420.0				420.0			
Total	1,733.0	11.16	88.41	2,624	1,962.0	14.36	126.37	3,395

DATE: JULY 24.

Bread	1.5	1.5	146.0	2.19	2.19	409	222.0	3.33	3.33	622	214.0	3.21	3.21	599	64.0	0.96	0.96	179	48.0	0.72	0.72	134	192.0	2.88	2.88	538
Butter		84.0	53.0		44.52	414	61.0		51.24	476	84.0		70.56	656	25.0		21.0	195	27.0		22.68	211	62.0		52.08	484
Sugar			68.0			279	147.0			603	53.0			217	89.0			365	141.0			578	127.0			521
Milk	.5	3.5	500.0	2.5	17.5	335	250.0	1.25	8.75	168	250.0	1.25	8.75	168	750.0	3.7	26.25	503	210.0	1.05	7.35	141	250.0	1.25	8.75	168
Cream	.4	18.5	110.0	.44	20.35	231	110.0	.44	20.35	231	110.0	.44	20.35	231	110.0	.44	20.35	231	110.0	.44	20.35	231	110.0	.44	20.35	231
Meat, halibut	4.3	3.3	53.0	2.27	1.74	75	129.0	5.54	4.25	182	126.0	5.41	4.15	178	116.0	4.98	3.82	164	126.0	5.41	4.15	178	112.0	4.81	3.69	158
Potatoes, boiled	.33		224.0	.74		224	214.0	.71		214	240.0	.8		240					206.0	.68		206	176.0	.58		176
Eggs	1.4	9.0	55.0	.77	4.95	66	75.0	1.05	6.75	90	83.0	1.16	7.47	100									91.0	1.27	8.19	109
Rice	.25		84.0	.21		88	82.0	.2		86					76.0	.19		80	86.0	.21		90	75.0	.18		79
Cabbage	.24		30.0	.07		8	55.0	.13		15	44.0	.1		12					73.0	.17		20	53.0	.12		14
Custard	.75	3.1	120.0	.9	3.72	220	135.0	1.02	4.19	248	110.0	.82	3.41	202	122.0	.92	3.78	224	184.0	1.38	5.70	338	71.0	.53	2.2	130
Corn flakes	1.0		15.0	.15		55	30.0	.3		110	40.0	.4		147	35.0	.35		128	40.0	.4		147	46.0	.46		169
Tomatoes	.13		91.0	.11		21	107.0	.13		25	103.0	.13		24	106.0	.13		24	142.0	.18		33	105.0	.13		24
Dates	.29		70.0	.2		248	74.0	.21		262					82.0	.23		291	108.0	.3		383	72.0	.2		256
Fish sauce	.12	4.8	47.0	.05	2.25	23	68.0	.08	3.26	33	137.0	.16	6.57	66	129.0	.15	6.19	62	133.0	.15	6.38	64	144.0	.17	6.91	69
Coffee			210.0				210.0												210.0				210.0			
Ice tea			210.0				630.0				420.0								550.0				420.0			
Total			1,666.0	10.60	97.22	2,696	1,759.0	14.39	102.12	3,365	1,594.0	13.88	124.47	2,840	1,704.0	12.05	82.35	2,446	1,634.0	11.09	67.33	2,754	1,686.0	13.02	105.05	3,126

DATE: JULY 25.

Bread	1.5	1.5	131.0	1.96	1.96		218.0	3.27	3.27		222.0	3.33	3.33		102.0	1.53	1.53		200.0	3.0	3.0		208.0	3.12	3.12	
Butter		84.0	45.0		37.8		48.0		40.32		99.0		83.16		41.0		34.44		69.0		57.96		64.0		53.76	
Sugar			44.0				179.0				99.0				148.0				156.0				190.0			
Milk	.5	3.5	710.0	3.55	24.85		210.0	1.05	7.35		460.0	2.3	16.1		930.0	4.65	32.55		210.0	1.05	7.35		210.0	1.05	7.35	
Cream	.4	18.5	60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1	
Meat, veal	4.9	6.1	29.0	1.42	1.76		56.0	2.74	3.41		61.0	2.98	3.72		59.0	2.89	3.59		57.0	2.79	3.47		60.0	2.94	3.66	
Potatoes, boiled	.33		124.0	.41			118.0	.39			101.0	.33							76.0	.25			78.0	.26		
Baked beans	1.1	2.8	284.0	3.12	7.95		290.0	3.19	8.12		335.0	3.68	9.38		121.0	1.33	3.38		199.0	2.18	5.57		341.0	3.75	9.54	
Gravy	.25	4.0	52.0	.13	2.08		77.0	.19	3.08		60.0	.15	2.4		63.0	.15	2.52		87.0	.21	3.48		82.0	.2	3.28	
Corn flakes	1.0		11.0	.11			49.0	.49			49.0	.49			30.0	.3			47.0	.47			60.0	.6		
Apple sauce	.13		14.0				90.0	.11			98.0	.13			30.0				108.0	.14			88.0	.11		
Tomatoes	.13		157.0	.2			196.0	.25			198.0	.25			125.0	.16			205.0	.26			174.0	.22		
Bananas	.12		170.0	.2			174.0	.2			167.0	.2			147.0	.17			168.0	.2			162.0	.19		
Prunes	.12		103.0	.12			141.0	.16			118.0	.14			119.0	.14			182.0	.21			159.0	.18		
Chocolate cake	1.1	18.0					72.0	.79	12.96										67.0	.73	12.06		74.0	.81	13.32	
Coffee			210.0				250.0												170.0				210.0			
Ice tea							830.0				420.0								420.0				420.0			
Total			1,934.0	11.46	87.50		1,978.0	13.07	89.61		2,127.0	14.22	129.19		1,975.0	11.56	89.11		1,891.0	11.73	103.99		2,010.0	13.67	105.13	

Daily food chart—Continued.

DATE : JULY 26.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Subject I Nitrogen.	Subject I Ether extract.	Subject I Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Subject II Nitrogen.	Subject II Ether extract.	Subject II Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.6	1.5	100.0	1.6	1.5	.....	120.0	1.92	1.8	.....
Butter	.....	84.0	29.0	.....	24.36	.....	49.0	.....	41.16	.....
Sugar	.....	.....	26.0	.....	.....	.....	147.0	.....	.....	.....
Milk	.5	3.5	380.0	1.9	13.3	.....	970.0	4.85	33.95	.....
Cream	.4	18.5	50.0	.2	9.25	.....	84.0	.33	15.54	.....
Meat, roast beef	5.1	7.7	60.0	3.06	4.62	.....	104.0	5.30	8.0	.....
Potatoes, boiled	.33	.....	100.0	.33	.....	.....	159.0	.53	.....	.....
Baked beans	1.2	4.0	96.0	1.15	3.84	.....	178.0	2.13	7.12	.....
Gravy	.25	4.0	53.0	.13	2.12	.....	118.0	.29	4.72	.....
Corn flakes	1.0	.....	22.0	.22	.....	.....	59.0	.59	.....	.....
Pudding	.5	1.0	103.0	.51	1.03	.....	132.0	.66	1.32	.....
Oranges	.1	.....	203.0	.2	.....	.....	236.0	.24	.....	.....
Banana jelly	.35	.....	.....	.....	.....	.....	214.0	.80	.....	.....
Coffee	.....	.....	.....	.....	.....	.....	210.0	.....	.....	.....
Ice tea	.....	.....	.....	.....	.....	.....	420.0	.....	.....	.....
Total	.....	.....	1,222.0	9.30	60.02	.....	2,570.0	17.34	113.61	.....

Kind of food.	Subject III (A. G.). Amount of food.	Subject III Nitrogen.	Subject III Ether extract.	Subject III Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Subject IV Nitrogen.	Subject IV Ether extract.	Subject IV Estimated fuel value.
	Gms.	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	159.0	2.54	2.38	.....	165.0	2.64	2.47	.....
Butter	85.0	.....	71.4	.....	74.0	.....	62.16	.....
Sugar	96.0	.....	.....	.....	138.0	.....	.....	.....
Milk	460.0	2.3	16.1	.....	960.0	4.8	33.6	.....
Cream	86.0	.34	15.91	.....	92.0	.36	17.02	.....
Meat, roast beef	109.0	5.55	8.39	.....	118.0	6.01	9.08	.....
Potatoes, boiled	220.0	.73	.....	.....	.....	.....	.....	.....
Baked beans	97.0	1.16	3.88	.....	.....	.....	.....	.....
Gravy	130.0	.32	5.2	.....	125.0	.31	5.0	.....
Corn flakes	54.0	.54	.....	.....	38.0	.38	.....	.....
Pudding	138.0	.69	1.38	.....	121.0	.6	1.21	.....
Oranges	127.0	.13	.....	.....	213.0	.21	.....	.....
Banana jelly	233.0	.81	.....	.....	196.0	.72	.....	.....
Coffee	.....	.....	.....	.....	.....	.....	.....	.....
Ice tea	630.0	.....	.....	.....	.....	.....	.....	.....
Total	1,992.0	15.11	124.64	.....	2,240.0	16.03	130.54	.....

Kind of food.	Subject V (A. M. N.). Amount of food.	Subject V Nitrogen.	Subject V Ether extract.	Subject V Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Subject VI Nitrogen.	Subject VI Ether extract.	Subject VI Estimated fuel value.
	Gms.	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	64.0	1.02	.96	.....	202.0	3.23	3.03	.....
Butter	23.0	.....	19.32	.....	63.0	.....	52.92	.....
Sugar	96.0	.....	.....	.....	163.0	.....	.....	.....
Milk	210.0	1.05	7.35	.....	210.0	1.05	7.35	.....
Cream	95.0	.38	17.57	.....	57.0	.22	10.54	.....
Meat, roast beef	120.0	6.12	9.24	.....	110.0	5.61	8.47	.....
Potatoes, boiled	128.0	.42	.....	.....	162.0	.54	.....	.....
Baked beans	109.0	1.3	4.36	.....	171.0	2.05	6.84	.....
Gravy	134.0	.33	5.36	.....	130.0	.32	5.20	.....
Corn flakes	57.0	.57	.....	.....	65.0	.65	.....	.....
Pudding	149.0	.74	1.49	.....	144.0	.72	1.44	.....
Oranges	248.0	.25	.....	.....	201.0	.2	.....	.....
Banana jelly	215.0	.8	.....	.....	203.0	.75	.....	.....
Coffee	170.0	.....	.....	.....	250.0	.....	.....	.....
Ice tea	420.0	.....	.....	.....	420.0	.....	.....	.....
Total	1,648.0	12.98	65.65	.....	1,881.0	15.34	95.79	.....

DATE: JULY 27.

Bread	1.5	1.5	215.0	3.22	3.22	602	215.0	3.22	3.22	602	237.0	3.55	3.55	663	75.0	1.12	1.12	210	100.0	1.5	1.5	280	227.0	3.4	3.4	635
Butter		84.0	58.0		48.72	453	73.0		61.32	570	133.0		111.72	1,038	33.0		27.72	258	63.0		52.92	492	73.0		61.32	570
Sugar			68.0			278	142.0			582	93.0			381	56.0			230	99.0			406	145.0			594
Milk	.5	3.5	520.0	2.6	18.2	348	210.0	1.05	7.35	174	210.0	1.05	7.35	174	710.0	3.55	24.85	476	210.0	1.05	7.35	174	210.0	1.05	7.35	174
Cream	.4	18.5	110.0	.44	20.35	221	110.0	.44	20.35	221	110.0	.44	20.35	221	110.0	.44	20.35	221	110.0	.44	20.35	221	110.0	.44	20.35	221
Meat, veal loaf	3.0	6.6	63.0	1.89	4.15	87	77.0	2.31	5.08	106	82.0	2.46	5.41	113	74.0	2.22	4.88	102	84.0	2.52	5.54	116	74.0	2.22	4.88	102
Meat, roast beef hash	2.3	9.2	80.0	1.84	7.36	116	84.0	1.93	7.72	122	125.0	2.87	11.5	181	81.0	1.86	7.45	117	83.0	1.93	7.63	120	79.0	1.81	7.26	115
Potatoes, boiled	.33		227.0	.75		227	236.0	.78		236	211.0	.7		211	33.0	.11		33	175.0	.58		175	235.0	.78		235
Eggs	1.5	10.0	55.0	.82	5.5	72	85.0	1.27	8.5	111	90.0	1.35	9.0	118									97.0	1.45	9.7	127
Boiled onions	.1		12.0			3	72.0	.07		16	72.0	.07		16	23.0			5	83.0	.08		19	67.0	.07		15
Corn flakes	1.0		15.0	.15		55	64.0	.64		235	45.0	.45		165	23.0	.23		85	53.0	.53		194	65.0	.65		238
String beans	.21		61.0	.12		13	87.0	.18		19	63.0	.13		14					69.0	.14		15	88.0	.18		19
Rice	.25		67.0	.16		68	101.0	.25		106	89.0	.22		93	75.0	.18		79	82.0	.2		86	76.0	.19		80
Custard	.73	.8	52.0	.37	.41	96	193.0	1.4	1.54	355	162.0	1.18	1.29	298	203.0	1.48	1.62	373	222.0	1.62	1.77	408	202.0	1.47	1.61	371
Figs	.14		14.0			46	96.0	.13		312	107.0	.15		348	106.0	.14		344	101.0	.14		328	106.0	.14		344
Coffee			420.0				250.0												110.0							
Ice tea							420.0				420.0								520.0				420.0			
Total			1,617.0	12.36	107.91	2,685	1,845.0	13.67	115.08	3,767	1,829.0	14.62	170.17	4,034	1,602.0	11.33	87.99	2,533	1,534.0	10.73	97.06	3,034	1,854.0	14.85	115.87	3,840

DATE: JULY 28.

Bread	1.5	1.5	171.0	2.56	2.56		289.0	4.33	4.33		241.0	3.61	3.61		97.0	1.4	1.4		75.0	1.12	1.12		248.0	3.72	3.72	
Butter		84.0	62.0		52.08		99.0		83.16		135.0		113.4		50.0		42.0		54.0		45.36		90.0		75.6	
Sugar			73.0				138.0				104.0				143.0				200.0				190.0			
Milk	.5	3.5	840.0	4.2	29.4		210.0	1.05	7.35		460.0	2.3	16.1		960.0	4.8	33.6		210.0	1.05	7.35		210.0	1.05	7.35	
Cream	.4	18.5	120.0	.48	22.2		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1	
Meat, beef hash	2.9	9.2	173.0	5.01	15.91		187.0	5.42	17.2		179.0	5.19	16.46		179.0	5.19	16.46		191.0	5.53	17.57		180.0	5.22	16.56	
Eggs	1.4	9.8	59.0	.82	5.78		69.0	.96	6.76		67.0	.93	6.56										78.0	1.09	7.64	
Potatoes, boiled	.3		270.0	.81			244.0	.73			281.0	.84							200.0	.6			266.0	.79		
String beans	.21		44.0	.09			46.0	.09			57.0	.12							53.0	.11			64.0	.13		
Rice	.25		84.0	.21							83.0	.2			123.0	.3			100.0	.25			95.0	.23		
Creamed rice	.4	4.0	166.0	.66	6.64		253.0	1.01	10.12		131.0	.52	5.24		180.0	.72	7.20		136.0	.54	5.44		160.0	.64	6.40	
Corn flakes	1.0		13.0	.13			38.0	.38			34.0	.34			27.0	.27			29.0	.29			40.0	.4		
Bananas	.12		152.0	.18			141.0	.16			165.0	.19			158.0	.18			178.0	.21			151.0	.18		
Tomatoes	.13		115.0	.14			166.0	.21			162.0	.21			119.0	.15			152.0	.19			142.0	.18		
Coffee			210.0				210.0												170.0				210.0			
Ice tea							420.0				630.0								800.0				420.0			
Total			2,342.0	15.29	134.57		1,750.0	14.58	140.02		2,159.0	14.69	172.47		2,096.0	13.25	111.76		1,638.0	10.13	87.94		1,974.0	13.87	128.37	

Daily food chart—Continued.

DATE: JULY 29.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Subject I Nitrogen.	Subject I Ether extract.	Subject I Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Subject II Nitrogen.	Subject II Ether extract.	Subject II Estimated fuel value.	Subject III (A. G.). Amount of food.	Subject III Nitrogen.	Subject III Ether extract.	Subject III Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Subject IV Nitrogen.	Subject IV Ether extract.	Subject IV Estimated fuel value.	Subject V (A. M. N.). Amount of food.	Subject V Nitrogen.	Subject V Ether extract.	Subject V Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Subject VI Nitrogen.	Subject VI Ether extract.	Subject VI Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	168.0	2.52	2.52		300.0	4.5	4.5		269.0	4.03	4.03		103.0	1.54	1.54		200.0	3.0	3.0		228.0	3.42	3.42	
Butter		84.0	55.0		46.2		95.0		79.8		125.0		105.		66.0		55.44		68.0		57.12		59.0		49.56	
Sugar			57.0				167.0				73.0				123.0				214.0				171.0			
Milk	.5	3.5	810.0	4.05	28.35		210.0	1.05	7.35		460.0	2.3	16.1		1,160.0	5.8	40.6		210.0	1.05	7.35		210.0	1.05	7.35	
Cream	.4	18.5	60.0	.24	11.1		60.0	.24	11.1		60.0	.24	11.1						60.0	.24	11.1		60.0	.24	11.1	
Meat, roast beef	5.9	5.6	46.0	2.71	2.57		44.0	2.59	2.46		45.0	2.65	2.52		85.0	5.01	4.76		49.0	2.89	2.74		49.0	2.89	2.74	
Eggs	2.1	15.1	43.0	.9	6.49		75.0	1.57	11.32		78.0	1.63	11.79						65.0	1.36	9.81		70.0	1.47	10.57	
Potatoes, boiled	.33		224.0	.74			293.0	.97			110.0	.36							105.0	.35			157.0	.52		
Gravy	.43	5.3					75.0	.32	3.97		77.0	.33	4.08		174.0	.74	9.22		86.0	.36	4.55		83.0	.35	4.39	
Baked beans	1.3	3.0	218.0	2.83	6.54		199.0	2.58	5.97		210.0	2.73	6.3		154.0	1.9	4.62		204.0	2.65	6.12		181.0	2.39	5.43	
Tomatoes, escalloped	.61		107.0	.65			152.0	.92			136.0	.82							172.0	1.04			163.0	1.0		
Tomatoes	.13		126.0	.16			123.0	.15			127.0	.16			80.0	.1			128.0	.16			113.0	.14		
Corn flakes	1.0		17.0	.17			44.0	.44			42.0	.42			28.0	.28			37.0	.37			47.0	.47		
Chocolate pudding	.62	1.2	31.0	.19	.37		97.0	.6	1.16		101.0	.62	1.21		111.0	.68	1.33		119.0	.73	1.43		119.0	.73	1.43	
Oranges	.1		134.0	.13			169.0	.17			168.0	.17			129.0	.13			167.0	.17			158.0	.16		
Peaches	.13		110.0	.14			142.0	.18			135.0	.17			125.0	.16			136.0	.17			120.0	.15		
Coffee			210.0				210.0												170.0				210.0			
Ice tea							410.0				410.0								510.0				410.0			
Total			2,206.0	15.43	104.14		2,245.0	16.28	127.63		2,216.0	16.63	162.13		2,338.0	16.34	117.51		2,020.0	14.54	103.22		1,988.0	14.98	95.99	

DATE: JULY 30.

Bread	1.5	1.5	120.0	1.8	1.8		364.0	5.46	5.46		170.0	2.55	2.55		122.0	1.83	1.83		72.0	1.08	1.08		213.0	3.19	3.19	
Butter		84.0	36.0		30.24		74.0		62.16		93.0		78.12		55.0		46.2		38.0		31.92		58.0		48.72	
Sugar			61.0				168.0				99.0				103.0				141.0				193.0			
Milk	.5	3.5	950.0	4.7	33.25		200.0	1.0	7.0		200.0	1.0	7.0		950.0	4.7	33.25		200.0	1.0	7.0		200.0	1.0	7.0	
Cream	.4	18.5	110.0	.44	20.35		110.0	.44	20.35		110.0	.44	20.35		110.0	.44	20.35		110.0	.44	20.35		110.0	.44	20.35	
Meat, roast beef	5.7	7.7	103.0	5.87	7.93		101.0	5.75	7.77		106.0	6.04	8.16		103.0	5.87	7.93		100.0	5.7	7.7		105.0	5.98	8.08	
Meat																										
Potatoes, boiled	.33		190.0	.63			301.0	1.0			212.0	.7							172.0	.57			227.0	.75		
Lima beans	.94						96.0	.9			22.0	.2							70.0	.65			125.0	1.17		
Malta Vita	1.14		25.0	.28			33.0	.37			41.0	.46			19.0	.21			36.0	.41			55.0	.62		
Gelatine	.19		155.0	.29			213.0	.4			168.0	.35			181.0	.34			305.0	.57			240.0	.45		
Custard	.78	.85	94.0	.73	.79		138.0	1.07	1.17		128.0	1.0	1.08		137.0	1.06	1.16		185.0	1.44	1.57		152.0	1.18	1.29	
Gravy	.2	5.3	102.0	.2	5.4		109.0	.21	5.45		116.0	.23	6.14		117.0	.23	6.2		127.0	.25	6.73		119.0	.23	6.3	
Cabbage	.24		42.0	.1			63.0	.15			64.0	.15			55.0	.12			76.0	.18			60.0	.14		
Peaches	.13		136.0	.17			144.0	.18			166.0	.21			137.0	.17			156.0	.2			144.0	.18		
Coffee			200.0				200.0												100.0				200.0			
Ice tea							410.0				410.0								410.0				410.0			
Total			2,124.0	15.21	99.76		2,114.0	16.93	109.36		1,695.0	13.33	123.40		2,089.0	14.97	116.92		1,788.0	12.49	76.35		2,001.0	15.33	94.93	

DATE: JULY 31.

Bread	1.5	1.5	75.0	1.12	1.12		281.0	4.21	4.21		250.0	3.75	3.75		96.0	1.44	1.44		88.0	1.32	1.32		206.0	3.09	3.09	
Butter		84.0	33.0		27.72		106.0		89.04		145.0		121.8		71.0		59.64		39.0		32.76		69.0		57.96	
Sugar			58.0				180.0				131.0				185.0				190.0				172.0			
Milk	.5	3.5	1,200.0	6.0	42.0		450.0	2.25	15.75		200.0	1.0	7.0		950.0	4.75	33.25		200.0	1.0	7.0		350.0	1.75	12.25	
Cream	.4	18.5	120.0	.48	22.2		120.0	.48	22.2		120.0	.48	22.2		120.0	.48	22.2		120.0	.48	22.2		120.0	.48	22.2	
Meat, hash	1.5	7.4	100.0	1.5	7.4		104.0	1.56	7.69		103.0	1.54	7.62		101.0	1.5	7.47		109.0	1.63	8.06		107.0	1.6	7.91	
Meat, mutton	4.3	11.6	64.0	2.75	7.42		63.0	2.7	7.3		64.0	2.75	7.42		65.0	2.79	7.54		60.0	2.58	6.96		61.0	2.62	7.07	
Potatoes, boiled	.33		317.0	1.05			243.0	.81			220.0	.73							186.0	.62			241.0	.8		
Gravy	.2	4.0	70.0	.14	2.8		68.0	.13	2.72		74.0	.14	2.96		69.0	.13	2.76		69.0	.13	2.76		67.0	.13	2.68	
Malta Vita	1.14		13.0	.14			46.0	.52			45.0	.51			36.0	.41			46.0	.52			57.0	.64		
Rice	.25		83.0	.2			86.0	.21			91.0	.22			82.0	.2			113.0	.28			96.0	.24		
Lemon pudding	.24	1.2	119.0	.28	1.42		131.0	.31	1.57		152.0	.36	1.82						190.0	.45	2.28		168.0	.4	2.01	
Tomatoes	.12		228.0	.27			235.0	.28			272.0	.32			126.0	.15			281.0	.33			256.0	.3		
Bananas	.12		142.0	.16			187.0	.22			170.0	.2			172.0	.2			197.0	.23			157.0	.18		
Coffee							200.0												170.0				200.0			
Ice tea							400.0				400.0								320.0				400.0			
Total			2,622.0	14.09	112.08		2,300.0	14.18	150.48		2,037.0	12.00	174.54		2,073.0	12.05	134.30		1,888.0	9.57	83.34		2,127.0	12.23	115.17	

Daily food chart—Continued.

DATE: AUGUST 1.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	101	1.51	1.51	.....	211	3.16	3.16	.....	165	2.47	2.47	.....	129	1.93	1.93	.....	173	2.59	2.59	.....	270	4.05	4.05	.....
Butter	.....	84.0	38	.....	31.92	.....	53	.....	44.52	.....	140	.....	117.6	.....	74	.....	62.16	.....	61	.....	51.24	.....	91	.....	76.44	.....
Sugar	.....	.....	82	.....	.....	.....	138	.....	.....	.....	61	.....	.....	.....	140	.....	.....	.....	163	.....	.....	.....	142	.....	.....	.....
Milk	.5	3.5	690	3.45	24.15	.....	.....	.....	.....	.....	450	2.25	15.75	.....	950	4.75	33.25	.....	200	1.0	7.0	.....	200	1.0	7.0	.....
Cream	.4	18.5	120	.48	22.2	.....	60	.24	11.1	.....	120	.48	22.2	.....	120	.48	22.2	.....	120	.48	22.2	.....	120	.48	22.2	.....
Meat, fresh pork	4.8	13.3	51	2.44	6.78	.....	51	2.44	6.78	.....	50	2.2	6.65	.....	53	2.34	7.04	.....	50	2.4	6.65	.....	50	2.4	6.65	.....
Eggs	1.5	8.6	26	.39	2.23	.....	100	1.5	8.6	.....	83	1.24	7.13	.....	.....	.....	.....	.....	.....	.....	.....	.....	103	1.54	8.85	.....
Potatoes, boiled	.33	.....	238	.79	.....	.....	139	.46	.....	.....	102	.33	.....	.....	.....	.....	.....	.....	91	.3	.....	.....	232	.77	.....	.....
Baked beans	.82	3.8	304	2.49	11.55	.....	100	.82	3.8	.....	592	4.85	22.49	.....	293	2.4	11.13	.....	335	2.74	12.73	.....	312	2.55	11.85	.....
Gravy	.2	4.0	61	.12	2.44	.....	67	.13	2.68	.....	66	.13	2.64	.....	63	.12	2.52	.....	72	.14	2.88	.....	70	.14	2.8	.....
Pudding (lemon)	.56	1.2	81	.45	.97	.....	71	.39	.85	.....	86	.48	1.03	.....	88	.49	1.05	.....	114	.63	1.36	.....	97	.54	1.16	.....
Malta Vita	1.14	.....	11	.12	.....	.....	44	.5	.....	.....	40	.45	.....	.....	33	.37	.....	.....	37	.42	.....	.....	53	.6	.....	.....
Tomatoes	.13	.....	208	.27	.....	.....	242	.31	.....	.....	228	.29	.....	.....	123	.15	.....	.....	262	.34	.....	.....	243	.31	.....	.....
Oranges	.1	.....	121	.12	.....	.....	155	.16	.....	.....	.....	.....	.....	.....	158	.16	.....	.....	166	.17	.....	.....	167	.17	.....	.....
Prunes	.12	.....	115	.13	.....	.....	155	.18	.....	.....	155	.18	.....	.....	172	.2	.....	.....	199	.23	.....	.....	183	.21	.....	.....
Coffee	.....	.....	200	.....	.....	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100	.....	.....	.....	200	.....	.....	.....
Ice tea	.....	.....	.....	.....	.....	.....	400	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	.....	400	.....	.....	.....	400	.....	.....	.....
Total	.....	.....	2,247	12.76	103.75	.....	1,586	10.29	81.49	.....	2,338	15.35	197.96	.....	2,396	13.39	141.28	.....	2,043	11.44	106.65	.....	2,333	14.76	141.00	.....

DATE: AUGUST 2.

Bread	1.5	1.5	30	.45	.45	84	101	1.51	1.51	283	237	3.55	3.55	664	57	.85	.85	160	126	1.89	1.89	353	140	2.1	2.1	392
Butter		84.0	35		29.4	273	29		24.36	226	125		105.0	976	68		57.12	531	66		55.44	515	68		57.12	531
Sugar			54			221	149			611	72			295	77			316	124			508	157			644
Milk	.5	3.5	715	3.57	25.02	479	200	1.0	7.0	134	450	2.25	15.75	301	950	4.75	33.25	637	700	3.5	24.5	469	200	1.0	7.0	134
Cream	.4	18.5	70	.28	12.95	141	60	.24	11.1	121	60	.24	11.1	121					60	.24	11.1	121	60	.24	11.1	121
Meat, mutton	3.0	9.6	74	2.22	7.1	123					77	2.21	7.39	128	87	2.61	8.35	144	78	2.34	7.48	129	79	2.37	7.58	130
Meat, fresh pork	4.4	10.6	49	2.15	5.19	103	52	2.28	5.51	110	50	2.2	5.3	106	47	2.06	4.98	99	53	2.32	5.61	112	48	2.11	5.08	101
Potatoes, boiled	.33		183	.61		183	130	.43		130	246	.82		246					142	.47		142	180	.6		180
Baked beans	1.4	8.2	115	1.61	9.43	155					122	1.7	10.0	165	66	.92	5.41	89	138	1.93	11.31	186	112	1.56	9.18	151
Gravy	.2	4.0	55	.11	2.2	23	60	.12	2.4	25	65	.13	2.6	27	60	.12	2.4	25	67	.13	2.68	28	58	.11	2.32	24
Malta Vita	1.14		25	.28		89	59	.67		209	42	.47		149	37	.42		131	47	.53		166	52	.59		184
Rice custard	.63	4.0	97	.61	3.88	173	107	.67	4.28	190	295	1.85	11.8	525	252	1.58	10.08	449	365	2.3	14.6	650	316	2.0	12.54	562
Chocolate cake	.92	18.2	76	.69	13.83	274	82	.75	14.92	295					50	.46	9.1	180	117	1.07	21.29	421	137	1.26	24.93	493
Tomatoes	.13		103	.13		24	153	.19		35	139	.19		32	123	.15		28	158	.2		36	141	.18		32
Oranges	.1		149	.15		79	181	.18		96	141	.14		75					153	.15		81	131	.13		69
Coffee			200				200												100				250			
Ice tea							200				400								400				400			
Total			1,830	12.86	109.45	2,424	1,363	8.04	71.08	2,465	2,121	15.75	172.49	3,810	1,874	13.92	131.54	2,789	2,394	17.07	155.90	3,917	1,879	14.25	139.05	3,748

DATE: AUGUST 3.

Bread	1.5	1.5	97	1.45	1.45		226	3.39	3.39		169	2.53	2.53		125	1.87	1.87		102	1.52	1.52		230	3.45	3.45	
Butter		84.0	51		42.84		70		58.8		94		78.96		62		52.08		49		41.16		99		83.16	
Sugar			31				115				81				78				159				144			
Milk	.5	3.5	1,150	5.75	40.25		200	1.0	7.0		200	1.0	7.0		1,200	6.0	42.0		450	2.25	15.75		200	1.0	7.0	
Cream	.4	18.5	175	.7	32.37		175	.7	32.37		175	.7	32.37		175	.7	32.37		175	.7	32.37		110	.44	20.35	
Meat, hash	2.3	2.1	93	2.14	1.95		98	2.3	2.05		182	4.18	3.82		85	1.95	1.78		87	2.0	1.82		159	3.75	3.33	
Potatoes, boiled	.33		247	.82			102	.33			132	.44							91	.3			179	.59		
Baked beans	1.4	2.1	288	4.03	6.04		168	2.35	3.52		185	2.59	3.88		106	1.48	2.22		207	2.89	4.34		206	2.88	4.32	
Cottage cheese	2.7	2.4					137	3.72	3.28		168	4.53	4.03		60	1.62	1.44		115	3.15	2.76		191	5.15	4.58	
Malta Vita	1.14		16	.18			35	.4			42	.47			24	.27			39	.44			42	.47		
Cabbage	.24		12				33	.07			32	.07							64	.15			46	.11		
Tomatoes	.13		68	.08			80	.1			76	.09			53	.06			107	.14			105	.13		
Bananas	.12		115	.13			142	.17			153	.18			155	.18			151	.18			101	.12		
Prunes	.12		111	.13			131	.16			130	.15			148	.17			187	.22			158	.18		
Coffee																										
Ice tea			100				600				400								400				400			
Total			2,454	15.41	124.90		1,712	14.69	110.41		1,819	16.93	132.59		2,271	14.30	133.76		1,983	13.94	99.72		1,970	18.27	126.19	

Daily food chart—Continued.

DATE: AUGUST 4.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	195	2.92	2.92		196	2.94	2.94		160	2.4	2.4		97	1.45	1.45		192	2.86	2.86		216	3.24	3.24	
Butter		84.0	49		41.16		46		38.64		76		63.84		32		26.88		71		59.64		61		51.24	
Sugar			81				208				116				169				180				193			
Milk	.5	3.5	900	4.5	31.5		278	1.39	9.73		200	1.0	7.0		950	4.75	33.25		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	120	.48	22.2		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast veal	3.7	2.9	64	2.36	1.85		78	2.89	2.26		78	2.89	2.26		72	2.66	2.08		77	2.84	2.23		72	2.66	2.08	
Meat, veal loaf	6.0	13.1	59	3.54	7.72		57	3.42	7.46		57	3.42	7.46		57	3.42	7.46		58	3.48	7.59		67	4.02	8.77	
Potatoes, boiled	.33		235	.78			168	.56			177	.59							146	.48			169	.56		
Baked beans	1.4	3.7	75	1.05	2.77		77	1.07	2.84		89	1.24	3.29						87	1.21	3.21		92	1.28	3.4	
Gravy	.74	4.1	107	.75	4.38		120	.88	4.92		120	.88	4.92		144	1.06	5.9		150	1.11	6.15		133	.98	5.45	
Malta Vita	1.14		22	.25			37	.41			32	.36			29	.33			35	.39			45	.5		
Apple sauce	.13		20				144	.19			132	.17			77	.1			161	.21			144	.19		
Tomatoes	.13		76	.09			135	.17			131	.17							149	.19			123	.15		
Bananas	.12		123	.14			142	.17			153	.18			154	.18			155	.18			150	.18		
Peaches	.13		134	.17			123	.15			130	.16			130	.16			113	.14			112	.14		
Lemonade			250				250				250				250				250				250			
Coffee			250				250												100							
Ice tea							400				400								400				400			
Total			2,270	17.03	114.50		1,919	14.68	89.14		1,761	13.90	111.52		2,021	14.55	97.37		1,884	14.53	109.03		1,887	15.34	101.53	

DATE: AUGUST 5.

Bread	1.5	1.5	118	1.77	1.77	330	177	2.65	2.65	496	239	3.58	3.58	669	144	2.16	2.16	403	128	1.92	1.92	358	193	2.89	2.89	540
Butter		84.0	31		26.04	242	49		41.16	382	135		113.4	1,054	60		50.4	469	28		23.52	219	60		50.4	469
Sugar			55			226	144			590	82			336	74			303	155			636	171			701
Milk	.5	3.5	650	3.25	22.75	436	200	1.0	7.0	134	200	1.0	7.0	134	1,200	6.0	42.0	804	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	72	.28	13.32	145	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	60	.24	11.1	121
Meat, roast beef	5.6	20.5	116	6.49	23.78	387	110	6.16	22.55	367	176	9.85	36.08	588	151	8.45	30.95	504	110	6.16	22.55	367	143	8.12	29.31	478
Potatoes, boiled	.33		233	.77		233	244	.81		244	230	.76		230	143	.47		143	201	.67		201	231	.77		231
Gravy	.37	7.1	102	.37	7.24	164	150	.55	10.65	242	209	.75	14.83	336	208	.75	14.76	335	158	.58	11.21	254	166	.61	11.78	267
Corn flakes	1.0		20	.2		73	42	.42		154	47	.47		172	29	.29		106	51	.51		187	36	.36		132
Banana pudding	.3	2.0	89	.26	1.78	79	148	.44	2.96	132	161	.48	3.22	143	148	.44	2.96	132	178	.53	3.56	158	158	.47	3.16	141
Cottage cheese	2.7	1.2	57	1.53	.68	64					55	1.49	.66	62					68	1.83	.81	76	64	1.72	.76	72
Pudding	.3	1.0	21	.06	.21	21	91	.27	.91	93	91	.27	.91	93	91	.27	.91	93	111	.33	1.11	113	151	.45	1.51	154
Tomatoes	.13		206	.27		47	205	.27		47	257	.33		59					154	.19		35	244	.3		56
Peaches	.13		126	.16		118	146	.18		137	133	.16		125	78	.1		73	165	.21		155	160	.2		150
Oranges	.1		57	.06		30	60	.06		32	77	.08		41	92	.09		49	59	.06		31	42			22
Coffee			200				200												170				200			
Ice tea							400				400								550				400			
Total			1,953	15.47	97.77	2,595	1,876	13.25	108.23	3,271	2,202	19.66	200.03	4,233	2,528	19.46	164.49	3,635	1,876	14.43	92.03	3,145	2,079	17.13	117.91	3,668

DATE: AUGUST 6.

Bread	1.5	1.5	136	2.04	2.04		200	3.0	3.0		239	3.58	3.58		91	1.36	1.36		131	1.96	1.96		231	3.46	3.46	
Butter		84.0	48		40.32		63		52.92		124		104.16		90		75.6		75		63.0		88		73.92	
Sugar			63				145				110				129				214				170			
Milk	.5	3.5	950	4.75	33.25		200	1.0	7.0		200	1.0	7.0		1,150	5.75	40.25		200	1.0	7.0		100	.5	3.5	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		85	.34	15.72		110	.44	20.35	
Meat, hash	1.5	6.4	97	1.45	6.2		92	1.38	5.88		98	1.47	6.27		105	1.57	6.72		101	1.51	6.46		106	1.59	6.78	
Eggs	1.4	10.0	48	.67	4.8		100	1.4	10.0		133	1.86	13.3						104	1.45	10.4		108	1.51	10.8	
Potatoes, boiled	.33		301	1.0			115	.38			119	.39			87	.29			63	.21			236	.78		
Cake	.78	14.5	65	.5	9.42		59	.46	8.55		51	.39	7.39		56	.43	8.12		58	.45	8.41		61	.47	8.84	
Baked beans	1.2	1.5	181	2.17	2.71		178	2.13	2.67		308	3.69	4.62		113	1.35	1.69		182	2.18	2.73		147	1.76	2.2	
Cabbage	.24		17				44	.1			44	.1							48	.12			47	.11		
Rice	.23		79	.18			101	.23			93	.21			82	.18			108	.24			90	.2		
Corn flakes	1.0		20	.2			32	.32			40	.4			26	.26			45	.45			28	.28		
Apple sauce	.13		34				129	.17			119	.15			136	.17			169	.22			139	.18		
Oranges	.1		82	.08			122	.12			114	.11			107	.11			115	.12			99	.1		
Tomatoes	.13		59	.07			81	.1			71	.09							75	.09			95	.12		
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			2,290	13.55	119.09		1,771	11.23	110.37		1,973	13.88	166.67		2,282	11.91	154.09		1,773	10.34	115.68		1,855	11.50	129.85	

Daily food chart—Continued.

DATE: AUGUST 7.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	158	2.32	2.32	....	163	2.44	2.44	....	236	3.54	3.54	....	122	1.83	1.83	....	120	1.80	1.80	....	186	2.79	2.79	....
Butter	....	84.0	45	....	37.8	....	59	....	49.56	....	132	....	110.88	....	83	....	69.72	....	42	....	35.28	....	72	....	60.48	....
Sugar	....	....	76	....	....	....	191	....	....	....	65	....	....	....	150	....	....	....	168	....	....	....	219	....	....	....
Milk	.5	3.5	1,000	5.0	35.0	....	300	1.5	10.5	....	....	....	....	....	1,100	5.5	38.5	....	....	....	....	....	270	1.35	9.45	....
Cream	.4	18.5	110	.44	20.35	....	110	.44	20.35	....	110	.44	20.35	....	110	.44	20.35	....	110	.44	20.35	....	110	.44	20.35	....
Meat, veal loaf	3.3	7.7	89	2.93	6.85	....	84	2.77	6.46	....	86	2.83	6.62	....	87	2.97	6.69	....	87	2.97	6.69	....	94	3.1	7.23	....
Meat, veal	3.8	9.4	51	1.93	4.79	....	50	1.9	4.7	....	48	1.82	4.51	....	51	1.93	4.79	....	49	1.86	4.6	....	52	1.97	4.88	....
Potatoes, boiled	.3	....	220	.66	....	....	242	.72	....	....	177	.53	....	....	....	....	....	....	186	.55	....	....	250	.75	....	....
Eggs	2.1	15.8	28	.58	4.42	....	60	1.26	9.48	....	83	1.74	13.11	....	....	....	....	....	65	1.36	10.27	....	39	.81	6.16	....
Baked beans	1.2	2.7	108	1.29	2.91	....	104	1.24	2.8	....	183	2.19	4.94	....	....	....	....	....	101	1.21	2.72	....	106	1.27	2.86	....
Gravy	.25	4.0	132	.33	5.28	....	143	.35	5.72	....	140	.35	5.6	....	140	.35	5.6	....	140	.35	5.6	....	149	.36	5.96	....
Malta vita	1.14	....	17	.18	....	....	40	.45	....	....	....	....	....	....	23	.26	....	....	....	....	....	....	43	.49	....	....
Vanilla pudding	.64	3.2	85	.54	2.72	....	148	.98	4.73	....	148	.94	4.73	....	234	1.48	7.48	....	144	.92	4.6	....	121	.77	3.87	....
Tomatoes	.13	....	99	.13	....	....	107	.14	....	....	99	.13	....	....	90	.11	....	....	145	.18	....	....	143	.18	....	....
Blackberries	.2	....	168	.33	....	....	186	.37	....	....	177	.35	....	....	178	.35	....	....	173	.34	....	....	164	.32	....	....
Peaches	.13	....	130	.16	....	....	112	.14	....	....	128	.16	....	....	120	.15	....	....	128	.16	....	....	129	.16	....	....
Coffee	....	....	200	....	....	....	200	....	....	....	....	....	....	....	....	....	....	....	150	....	....	....	200	....	....	....
Ice tea	....	....	....	....	....	....	400	....	....	....	400	....	....	....	....	....	....	....	400	....	....	....	400	....	....	....
Total	....	....	2,516	16.82	122.44	....	2,099	14.66	116.74	....	1,812	15.02	174.28	....	2,488	15.27	154.96	....	1,658	12.17	91.94	....	2,147	14.76	124.03	....

DATE: AUGUST 8.

Bread	1.5	1.5	134	2.01	2.01		218	3.27	3.27		271	4.06	4.06		102	1.53	1.53		129	1.93	1.93		241	3.61	3.61	
Butter		84.0	37		31.08		62		52.08		115		96.6		87		73.08		65		54.6		85		71.4	
Sugar			60				164				119				178				190				209			
Milk	.5	3.5	910	4.55	31.35		250	1.25	8.75		250	1.25	8.75		1,160	5.8	40.6		250	1.25	8.75		250	1.25	8.75	
Cream	.4	18.5	120	.48	22.2		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast veal	6.5	9.4	55	3.57	5.17		62	4.03	5.82		49	3.18	4.6		62	4.03	5.82		65	4.22	6.11		66	4.29	6.2	
Eggs	1.3	10.0	43	.55	4.3		102	1.32	10.2		115	1.49	11.5						107	1.39	10.7		89	1.15	8.9	
Potatoes, boiled	.39		323	1.25			171	.66			126	.49			116	.45			133	.51			302	1.17		
Cake	.95	10.0	23	.21	2.3		62	.58	6.2										65	.61	6.5		72	.68	7.2	
Turnips	.2		19				77	.15							10				83	.17						
Baked beans	1.4	2.7	225	3.15	6.07		200	2.8	5.4		232	3.24	6.26		50	.7	1.35		170	2.38	4.59		205	2.87	5.53	
Gravy	.28	4.0	61	.17	2.44		63	.17	2.52		62	.17	2.48		58	.16	2.32		65	.18	2.6		62	.17	2.48	
Malta vita	1.14		22	.25			42	.47			40	.45			30	.34			37	.42			42	.47		
Gelatin	.47		133	.62			161	.75			165	.77			185	.86			238	1.11			202	.94		
Tomatoes	.13		96	.12			102	.13			93	.12			64	.08			102	.13			86	.11		
Blackberries	.2		158	.31			152	.3			157	.31			190	.38			184	.36			185	.37		
Apple sauce	.13						153	.2			149	.2			31				142	.19			180	.23		
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			2,419	17.24	106.92		2,151	16.52	114.59		2,053	16.17	154.60		2,433	14.77	145.05		2,135	15.29	116.13		2,386	17.75	134.42	

DATE: AUGUST 9.

Bread	1.5	1.5	180	2.7	2.7	504	213	3.19	3.19	596	247	3.7	3.7	692	124	1.86	1.86	347	229	3.43	3.43	643	206	3.09	3.09	577
Butter		84.0	41		34.44	320	62		52.08	484	128		107.52	1,000	99		83.16	773	80		67.2	625	76		63.84	594
Sugar			33			135	132			541	116			476	91			373	65			267	149			611
Milk	.5	3.5	850	4.25	29.75	570	200	1.0	7.0	134	450	2.25	15.75	302	1,100	5.5	38.5	737	350	1.75	12.25	235	200	1.0	7.0	134
Cream	.4	18.5	60	.24	11.1	121	60	.24	11.1	121	60	.24	11.1	121	60	.24	11.1	121	60	.24	11.1	121	60	.24	11.1	121
Meat, hash	1.8	10.5	87	1.56	9.13	197	74	1.33	7.77	167	91	1.63	9.55	205	78	1.4	8.19	176	93	1.67	9.76	210	152	2.74	15.96	344
Meat, roast beef	5.2	10.0	51	2.65	5.1	115	53	2.75	5.3	120	87	4.52	8.7	197	64	3.32	6.4	145	58	3.01	5.80	130	95	4.94	9.5	215
Potatoes, boiled	.33		246	.81		246	102	.33		102	214	.7		214	102	.33		102	141	.46		141	187	.61		187
Turnips	.2						57	.11		22	51	.1		19					77	.15		29	74	.14		28
Cottage cheese	3.0	2.0	44	1.32	.88	49					33	.99	.66	37					43	1.29	.86	48	33	.99	.66	36
Gravy	.38	4.0	62	.23	2.48	83	66	.25	2.64	88	123	.46	4.92	165	72	.27	2.88	96	74	.28	2.96	96	71	.26	7.45	95
Pudding	.54	1.0	40	.21	.40	41	133	.71	1.33	136	151	.81	1.51	154	155	.83	1.55	158	158	.85	1.58	161	144	.77	1.44	147
Custard	.55	4.7	30	.16	1.41	55	82	.45	3.85	151	83	.45	3.9	153	80	.44	3.76	147	78	.42	3.66	144	77	.42	3.61	142
Malta vita	1.14		15	.17		53	37	.42		137	47	.53		166	36	.41		127					52	.59		184
Tomatoes	.13		71	.09		16	70	.09		16	60	.78		14					62	.08		14	69	.08		16
Raspberries	.2		123	.25		84	136	.27		92	128	.26		87	128	.26		87	113	.23		77	109	.22		74
Coffee			200				200												200				200			
Ice tea							400				400								200				400			
Total			1,933	14.64	97.39	2,589	1,457	11.14	94.26	2,907	2,069	17.42	167.31	4,002	2,189	14.86	157.4	3,389	1,681	13.86	118.60	2,941	1,754	16.09	123.65	3,505

Daily food chart—Continued.

DATE: AUGUST 10.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	162	2.43	2.43	......	290	4.35	4.35	......	233	3.49	3.49	......	108	1.62	1.62	......	218	3.27	3.27	......	156	2.34	2.34	......
Butter	......	84.0	31	......	26.04	......	88	......	73.92	......	118	......	99.12	......	89	......	74.76	......	58	......	48.72	......	46	......	38.64	......
Sugar	......	......	46	......	......	......	146	......	......	......	91	......	......	......	137	......	......	......	144	......	......	......	140	......	......	......
Milk	.5	3.5	750	3.75	26.25	......	200	1.0	7.0	......	200	1.0	7.0	......	1,200	6.0	42.0	......	200	1.0	7.0	......	200	1.0	7.0	......
Cream	.4	18.5	216	.86	39.96	......	161	.64	29.78	......	105	.42	19.42	......	172	.68	31.82	......	173	.69	32.0	......	46	.18	8.51	......
Meat, hash	2.5	10.5	119	2.97	12.49	......	68	1.7	7.14	......	71	1.77	7.45	......	70	1.75	7.35	......	72	1.8	7.56	......	81	2.02	8.5	......
Meat, roast pork	4.4	17.1	54	2.37	9.23	......	64	2.81	10.94	......	90	3.96	15.39	......	60	2.64	10.26	......	60	2.64	10.26	......	63	2.77	10.77	......
Potatoes, boiled	.33	......	411	1.35	......	......	285	.94	......	......	308	1.01	......	......	198	.65	......	......	215	.7	......	......	271	.89	......	......
Eggs	1.3	10.0	29	.37	2.9	......	103	1.33	10.3	......	96	1.24	9.6	......	107	1.39	10.7	......	113	1.46	11.3	......	88	1.14	8.8	......
Gravy	.24	4.0	118	.28	4.72	......	127	.3	5.08	......	179	.42	7.16	......	124	.29	4.96	......	138	.33	5.52	......	122	.29	4.88	......
Baked beans	1.3	2.4	103	1.33	2.47	......	109	1.41	2.61	......	130	1.69	3.12	......	......	......	......	......	66	.85	1.58	......	127	1.65	3.04	......
Rice	.22	......	86	.18	......	......	94	.2	......	......	77	.16	......	......	87	.19	......	......	89	.19	......	......	89	.19	......	......
Malta vita	1.14	......	25	.28	......	......	46	.52	......	......	31	.35	......	......	56	.41	......	......	......	......	......	......	48	.54	......	......
Gelatin	.23	......	......	......	......	......	383	.88	......	......	379	.87	......	......	364	.83	......	......	370	.85	......	......	354	.81	......	......
Oranges	.1	......	128	.13	......	......	119	.12	......	......	......	......	......	......	25	......	......	......	173	.17	......	......	147	.15	......	......
Coffee	......	......	200	......	......	......	200	......	......	......	......	......	......	......	......	......	......	......	200	......	......	......	......	......	......	......
Ice tea	......	......	......	......	......	......	400	......	......	......	400	......	......	......	......	......	......	......	400	......	......	......	400	......	......	......
Total	......	......	2,278	16.30	126.49	......	2,283	16.20	151.12	......	2,108	16.38	171.75	......	2,777	16.43	183.47	......	2,089	13.95	127.21	......	1,978	13.97	92.48	......

DATE: AUGUST 11.

Bread	1.5	1.5	149	2.23	2.23		225	3.37	3.37		199	2.98	2.98		61	0.91	0.91		113	1.69	1.69		251	3.76	3.76	
Butter		84.0	39		32.76		81		68.04		18		15.12		43		36.12		39		32.76		79		66.36	
Sugar			43				189				93				84				121				173			
Milk	.5	3.5	900	4.5	31.5		310	1.55	10.85		500	2.5	17.5		1,110	5.55	38.85		250	1.25	8.75		250	1.25	8.75	
Cream	.4	18.5	115	.6	27.75		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast pork	4.8	17.1	55	2.64	9.4		56	2.68	9.57		56	2.68	9.57		59	2.83	9.88		62	2.97	10.6		64	3.07	10.94	
Meat, roast beef	5.4	10.0	52	2.8	5.2		56	3.02	5.6		64	3.45	6.4		68	3.67	6.8		73	3.94	7.3		71	3.83	7.1	
Potatoes, boiled	.33		303	.99			230	.75			320	1.05			92	.3			185	.61			286	.94		
Gravy	.32	1.3	68	.21	.88		65	.2	.84		69	.22	.89		62	.19	.8		71	.22	.92		66	.21	.85	
Corn flakes	.99		18	.17			30	.29			25	.24			38	.37			32	.31			36	.35		
Gelatin	.42		108	.45			146	.61			181	.76			171	.71			214	.89			172	.72		
Rice custard pudding	.49	4.0	74	.36	2.96		146	.71	5.84		181	.88	7.24		158	.77	6.32		180	.88	7.2		193	.94	7.72	
Tomatoes	.13		150	.19			234	.3			233	.3			37				204	.26			220	.28		
Bananas	.12		154	.18			146	.17			133	.15			159	.19			145	.17			148	.17		
Coffee			200				200												200				200			
Ice tea							600				400								400				400			
Total			2,228	15.32	112.68		2,024	14.09	124.46		2,182	15.65	80.05		2,252	15.93	120.03		1,799	13.63	89.57		2,109	15.96	125.83	

DATE: AUGUST 12.

Bread	1.5	1.5	442	6.63	6.63	1,238	197	2.95	2.95	552	287	4.3	4.3	804	100	1.5	1.5	280	145	2.17	2.17	406	267	4.0	4.0	748
Butter		84.0	44		36.96	344	83		69.72	648	108		90.72	843	50		42.0	391	47		39.48	367	74		62.16	578
Sugar			139			570	220			828	92			374	100			410	128			525	84			344
Milk	.5	3.5	950	4.75	33.25	637	200	1.0	7.0	134	700	3.5	24.5	469	700	3.5	24.5	469	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	120	.48	22.2	241	120	.48	22.2	241	120	.48	22.2	241	120	.48	22.2	241	120	.48	22.2	241	120	.48	22.2	241
Meat, roast beef	4.9	15.4	62	3.03	9.54	167	60	2.94	9.24	161	67	3.28	10.31	180	68	3.33	10.47	183	67	3.28	10.31	180	66	3.23	10.16	178
Potatoes, boiled	.36		259	.93		259	228	.82		228	140	.5		140	59	.21		59	115	.41		115	233	.83		233
Onions	.15		47	.07		11	103	.15		24	103	.15		24	22			5	97	.14		22	81	.12		19
Gravy	.31	4.0	68	.21	2.72	31	65	.2	2.6	29	73	.22	2.92	33	69	.21	2.76	31	73	.22	2.92	33	65	.2	2.6	29
Shredded wheat	1.7		34	.57		122	69	1.17		248	63	1.07		226	65	1.1		233	60	1.02		215	62	1.05		223
Custard	.9	4.7	56	.5	2.63	103	172	1.54	8.08	316	124	1.11	5.82	228	161	1.44	7.56	296	135	1.21	6.34	248	205	1.84	9.63	377
Baked beans	1.2	1.1	343	4.11	3.77	463	180	2.16	1.98	243	336	4.03	3.69	454	57	.68	.62	77	195	2.34	2.14	263	175	2.1	1.92	236
Baked tomatoes	.36		73	.26		32	135	.48		59	73	.26		32					63	.22		28	64	.23		28
Peaches	.13		161	.2		151	172	.22		162	185	.24		174	170	.22		160	92	.12		86	154	.2		145
Dates	.26		71	.18		252	98	.25		348	109	.28		387	105	.27		373	105	.27		373	114	.29		405
Coffee			200				200								150				150				200			
Ice tea							400				200								400				400			
Total			2,869	21.92	117.70	4,621	2,102	14.36	123.77	4,221	2,580	19.42	164.46	4,609	1,846	12.94	111.61	3,208	1,642	12.88	92.56	3,236	1,964	15.57	119.67	3,918

Daily food chart—Continued.

DATE: AUGUST 13.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	255	3.82	3.82		252	3.78	3.78		249	3.73	3.73		130	1.95	1.95		153	2.29	2.29		261	3.91	3.91	
Butter		84.0	62		52.08		68		57.12		131		110.04		98		82.32		75		63.0		79		66.36	
Sugar			37				187				79				94				100				165			
Milk	.5	3.5	900	4.5	31.5		200	1.0	7.0		200	1.0	7.0		1,120	5.6	39.2		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2	
Meat, hash	2.2	14.8	104	2.28	15.39		117	2.57	17.31		116	2.55	17.16		120	2.64	17.76		115	2.53	17.02		108	2.37	15.98	
Meat, pot roast	5.0	9.8	45	2.25	4.41		57	2.85	5.58						59	2.95	5.78		60	3.0	5.88		63	3.15	6.17	
Potatoes, boiled	.33		237	.78			243	.8			150	.49			27	.08			187	.61			225	.74		
Eggs	1.5	10.0	34	.51	3.4		90	1.35	9.0		96	1.44	9.6						107	1.6	10.7		92	1.38	9.2	
Baked beans	1.2	1.2	133	1.59	1.59		130	1.56	1.56		118	1.41	1.41		17	.2	.2		136	1.63	1.63		133	1.59	1.59	
Gravy	.35	4.0	70	.24	2.8		119	.41	4.76		123	.43	4.92		123	.43	4.92		123	.43	4.92		115	.4	4.6	
Shredded wheat	1.7		33	.56			67	1.13			62	1.05			28	.47			29	.49			62	1.05		
Gelatin	.26		141	.36			167	.43			175	.45			216	.56			300	.78			230	.59		
Slaw (cabbage)	.24		29	.06			38	.09			38	.09											38	.09		
Oranges	.1		45	.05			120	.12			102	.1			101	.1			94	.09			103	.1		
Blackberries	.21		114	.23			112	.23			131	.27			134	.28			117	.24			144	.3		
Coffee			200				200												150				200			
Ice tea							400				400								230				400			
Total			2,359	17.71	137.19		2,087	16.80	128.31		1,890	13.49	176.06		2,387	15.74	174.33		1,916	15.17	134.64		2,138	17.15	137.01	

DATE: AUGUST 14.

Bread	1.4	1.5	182	2.64	2.73		252	3.52	3.78		231	3.23	3.46		94	1.31	1.41		93	1.3	1.39		261	3.65	3.91	
Butter		84.0	61		51.24		86		72.24		138		115.92		59		49.56		26		21.84		89		74.76	
Sugar			56				196				93				145				128				123			
Milk	.5	3.5	700	3.5	24.5		230	1.15	8.05		200	1.00	7.0		835	4.17	29.22		200	1.0	7.0		300	1.5	10 5	
Cream	.4	18.5	150	.6	27.75		110	.44	20.35		110	.44	20.35		110	.44	20.35		120	.48	22.2		120	.48	22.2	
Meat, roast beef	5.2	9.4	102	5.3	9.58		108	5.61	10.15		114	5.92	10.72		117	6.08	11.0		111	5.77	10.43		113	5.87	10.62	
Eggs	1.5	10.0					96	1.44	9.6		89	1.33	8.9						72	1.08	7.2		104	1.56	10.4	
Potatoes, boiled	.33		274	.9			309	1.01			298	.98			122	.4			202	.66			257	.84		
Wax beans	.21		56	.11			64	.13			57	.11							83	.17			77	.16		
Corn flakes	1.08		20	.21			32	.34			26	.28			24	.25			25	.27			36	.38		
Chocolate pudding	.68	1.2	66	.44	.79		155	1.05	1.86		155	1.05	1.86		134	.91	1.61		168	1.14	2.02		130	.88	1.56	
Gravy	.53	6.0	116	.61	6.96		121	.64	7.26		119	.63	7.14		118	.62	7.08		119	.63	7.14		126	.66	7.56	
Cream sauce	.21		28	.05							67	.14							64	.13						
Blackberries	.2		227	.45			282	.56			266	.53			296	.59			351	.7			327	.65		
Tomatoes	.13		105	.13			261	.33			125	.16			90	.11			137	.17			127	.16		
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			2,143	14.84	123.55		2,302	16.22	133.29		2,088	15.80	175.35		2,144	14.88	120.23		1,899	13.50	79.22		2,190	16.79	141.51	

DATE: AUGUST 15.

Bread	1.4	1.5	113	1.58	1.69		310	4.34	4.65		238	3.33	3.57		137	1.91	2.05		171	2.39	2.56		247	3.45	3.7	
Butter		84.0	49		41.16		138		115.92		137		115.08		105		88.2		95		79.8		88		73.92	
Sugar			61				215				108				126				167				174			
Milk	.5	3.5	850	4.25	29.75		260	1.3	9.1		450	2.25	15.75		1,100	5.5	38.55		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	100	.4	18.5		100	.4	18.5		100	.4	18.5		100	.4	18.5		100	.4	18.5		100	.4	18.5	
Meat, hash	1.2	6.6	144	1.72	9.5		94	1.12	6.2		94	1.12	6.2		99	1.18	6.53		99	1.18	6.53		181	2.17	11.95	
Potatoes, boiled	.33		227	.74			84	.27			206	.67							116	.38			221	.72		
Stewed tomatoes	.2		84	.16			95	.19			88	.17							117	.23			95	.19		
Baked beans	1.3	2.4	340	4.42	8.16		190	2.47	4.56		323	4.19	7.75		132	1.71	3.16		203	2.63	4.87		201	2.61	4.82	
Corn flakes	1.0		16	.16			28	.28			30	.3			19	.19			27	.27			32	.32		
Custard pudding	.71	4.7	87	.61	4.08		178	1.26	8.36		183	1.29	8.6		138	.97	6.48		244	1.73	11.46		210	1.49	9.87	
Banana gelatin	.25		148	.37			174	.43			168	.42			164	.41			219	.54			181	.45		
Slaw (cabbage)	.24						29	.07			32	.08							63	.15			42	.1		
Dewberries	.1		127	.13			134	.13			149	.15			148	.15			146	.15			169	.17		
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			2,346	14.54	112.84		2,029	12.26	167.29		2,306	14.37	175.45		2,268	12.42	163.47		2,017	11.05	130.72		2,141	13.07	129.76	

Daily food chart—Continued.

DATE: AUGUST 16.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (C. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	83	1.24	1.24	232	187	2.8	2.8	524	198	2.97	2.97	554	100	1.5	1.5	280	156	2.34	2.34	437	217	3.25	3.25	608
Butter	.....	84.0	17	.....	14.28	133	66	.....	55.44	515	113	.....	94.92	883	77	.....	64.68	601	38	.....	31.92	297	88	.....	73.92	687
Sugar	.....	.....	62	.....	.....	254	217	.....	.....	890	153	.....	.....	627	127	.....	.....	521	137	.....	.....	562	177	.....	.....	726
Milk	.5	3.5	560	2.8	19.6	375	200	1.0	7.0	134	200	1.0	7.0	134	950	4.75	33.25	637	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221
Meat, roast pork	4.6	19.1	58	2.66	11.07	171	58	2.66	11.07	171	68	3.12	12.98	201	70	3.22	13.37	207	72	3.31	13.75	212	54	2.48	10.31	159
Meat, chicken	4.9	3.0	58	2.84	1.74	89	56	2.74	1.68	86	60	2.94	1.8	92	61	2.98	1.83	93	64	3.13	1.92	98	66	3.23	1.98	101
Potatoes, boiled	.34	.....	138	.46	.....	138	119	.4	.....	119	122	.41	.....	122	58	.19	.....	58	147	.49	.....	147	144	.48	.....	144
Potatoes, sweet, boiled	.14	.....	78	.10	.....	98	104	.14	.....	130	78	.1	.....	98	.....	.....	.....	.....	141	.19	.....	176	97	.13	.....	121
String beans	.34	.....	41	.13	.....	9	41	.13	.....	9	42	.14	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	49	.17	.....	11
Gravy	.32	4.0	148	.47	5.92	176	167	.53	6.68	199	129	.41	5.16	154	161	.51	6.44	192	224	.71	8.96	267	165	.52	6.6	196
Shredded wheat	1.7	.....	45	.76	.....	162	65	1.1	.....	233	65	1.1	.....	233	46	.78	.....	165	32	.54	.....	115	67	1.13	.....	241
Stewed turnips	.13	.....	29	.03	.....	5	80	.1	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	68	.08	.....	13	75	.09	.....	14
Coffee gelatin	.41	.....	.....	.....	.....	.....	217	.88	.....	28	221	.9	.....	29	230	.94	.....	30	240	.98	.....	31	237	.97	.....	31
Bananas	.12	.....	133	.15	.....	124	130	.15	.....	121	125	.15	.....	116	170	.2	.....	158	156	.18	.....	145	150	.18	.....	140
Stewed pears	.04	.....	53	.02	.....	26	96	.03	.....	47	108	.04	.....	53	70	.....	.....	34	146	.05	.....	72	123	.05	.....	60
Coffee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	.....	.....	.....	.....	.....	.....	.....
Ice tea	.....	.....	.....	.....	.....	.....	600	.....	.....	.....	800	.....	.....	.....	.....	.....	.....	.....	520	.....	.....	.....	600	.....	.....	.....
Total	.....	.....	1,613	12.10	74.20	2,213	1,913	13.10	105.02	3,442	1,792	13.72	145.18	3,526	2,230	15.51	141.42	3,197	1,931	13.44	86.24	2,927	1,919	14.12	123.41	3,594

DATE: AUGUST 17.

Bread	1.6	1.5	201	3.21	3.0	211	3.37	3.16	168	2.68	2.52	146	2.33	2.19	134	2.14	2.01	218	3.48	3.27
Butter		84.0	54		45.36	62		52.08	106		89.04	81		68.04	45		37.8	93		78.12
Sugar			61			209			125			97			164			161		
Milk	.5	3.5	850	4.25	29.75	200	1.0	7.0	200	1.0	7.0	950	4.75	33.25	200	1.0	7.0	200	1.0	7.0
Cream	.4	18.5	110	.44	20.35	110	.44	20.35	110	.44	20.35	110	.44	20.35	110	.44	20.35	110	.44	20.35
Meat, roast pork	4.9	16.0	63	3.08	10.08	63	3.08	10.08	69	3.38	11.04	68	3.33	10.88	70	3.43	11.2	74	3.63	11.84
Meat, roast beef	5.0	7.3	48	2.4	3.5	57	2.85	4.16	56	2.8	4.08	59	2.95	4.3	59	2.95	4.3	71	3.55	5.18
Eggs	1.4	10.0	20	.28	2.0	86	1.2	8.6	81	1.13	8.1				107	1.49	10.7	71	.99	7.1
Potatoes, boiled	.33		328	1.08		185	.61		282	.93					186	.61		253	.83	
Gravy	.38	1.0	127	.48	1.27	137	.52	1.37	124	.47	1.24	124	.47	1.24	126	.47	1.26	122	.46	1.22
Soup, chicken	.24	3.2	175	.42	5.6	165	.39	5.28	169	.4	5.4	170	.41	5.44	259	.62	8.28	186	.45	5.95
Corn flakes	1.0		17	.17		32	.32		27	.27		30	.3		31	.31		40	.4	
Peach gelatin	.47		141	.69		215	1.01		170	.79		169	.79		255	1.19		210	.98	
Baked beans	1.3	2.7	125	1.62	3.37	43	.55	1.16	135	1.75	3.64				48	.62	1.29	133	1.72	3.59
Stewed tomatoes	.13		84	.1		96	.12		94	.12		50	.06		99	.13		99	.13	
Bananas	.12		105	.12		127	.15		102	.12		108	.12		132	.15		119	.14	
Tomato preserves	.18		53	.09		65	.11		77	.13		68	.12		91	.16		67	.12	
Coffee			200			200									150			200		
Ice tea						400			600						400			340		
Total			2,562	18.43	124.28	2,063	15.72	113.24	2,095	16.41	152.41	2,230	16.07	145.69	2,116	15.71	104.19	2,227	18.32	143.62

DATE: AUGUST 18.

Bread	1.3	1.5	142	1.84	2.13	180	2.34	2.7	216	2.8	3.24	132	1.71	1.98	78	1.01	1.17	189	2.45	2.83
Butter		84.0	45		37.8	60		50.4	132		110.88	118		99.12	36		30.24	80		67.2
Sugar			79			219			89			131			136			165		
Milk	.53	3.5	810	4.29	28.35	200	1.06	7.0	200	1.06	7.0	950	5.03	33.25	200	1.06	7.0	200	1.06	7.0
Cream	.4	18.5	130	.52	24.05	120	.48	22.2	120	.48	22.2	120	.48	22.2	120	.48	22.2	120	.48	22.2
Meat, hash	2.4	5.7	76	1.82	4.33	90	2.16	5.13	83	1.99	4.73	84	2.01	4.78	94	2.25	5.35	98	2.35	5.58
Meat, roast beef	4.9	6.3	52	2.54	3.27	59	2.89	3.71	99	4.85	6.23	58	2.84	3.65	55	2.69	3.46	59	2.89	3.71
Potatoes, boiled	.4		158	.63		156	.62		155	.62		50	.2		121	.48		131	.52	
Potatoes, sweet	.26		152	.39		119	.3		126	.32		135	.35		175	.45		145	.37	
Gravy	.23	1.9	126	.28	2.39	119	.27	2.26	189	.43	3.59	126	.28	2.39	133	.3	2.52	125	.28	2.37
Corn flakes	1.0		13	.13		28	.28		25	.25		22	.22					32	.32	
Gelatin	.32		77	.24		166	.53		180	.57		165	.52		228	.72		196	.62	
Custard	.73	4.7	88	.59	4.13	141	1.02	6.62	168	1.22	7.89	159	1.16	7.47	247	1.8	11.6	184	1.34	8.64
Peaches	.13		170	.22		159	.2		150	.19		137	.17		170	.22		180	.23	
Tomatoes	.13		65	.08		118	.15		121	.15		68	.08		141	.18		109	.14	
Eggs	1.4	10.0				107	1.49	10.7	94	1.31	9.4				106	1.48	10.6	124	1.73	12.4
Coffee			200												150			200		
Ice tea						400			400						400			400		
Total			2,183	13.57	106.45	2,041	13.79	110.72	2,147	16.24	175.16	2,455	15.05	174.84	2,040	13.12	94.14	2,137	14.78	131.93

Daily food chart—Continued.

DATE: AUGUST 19.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	169	2.53	2.53	473	142	2.13	2.13	398	245	3.67	3.67	686	124	1.86	1.86	347	215	3.22	3.22	602	245	3.67	3.67	686
Butter		84.0	39		32.76	305	44		36.96	344	160		134.4	1,250	115		96.6	896	96		80.64	750	101		84.84	789
Sugar			56			230	137			562	105			431	84			344	87			357	153			627
Milk	.5	3.5	700	3.5	24.5	469	200	1.0	7.0	134	200	1.0	7.0	134	700	3.5	24.5	469	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	60	.24	11.1	121	60	.24	11.1	121	60	.24	11.1	121	60	.24	11.1	121	60	.24	11.1	121	60	.24	11.1	121
Meat, roast lamb	4.9	10.9	64	3.13	6.97	145	96	4.7	10.46	218	95	4.65	10.35	216	102	4.99	11.11	232	76	3.72	8.28	173	74	3.62	8.06	168
Eggs	1.9	10.0					69	1.31	6.9	98	85	1.61	8.5	121					73	1.38	7.3	104	71	1.34	7.1	101
Potatoes, boiled	.39		194	.75		194	198	.77		198	79	.3		79					86	.33		86	173	.67		173
Baked beans	1.6	1.8	226	3.61	4.06	305	170	2.72	3.06	230	279	4.46	5.02	377	99	1.58	1.78	134	198	3.16	3.56	267	205	3.28	3.69	277
Turnips	.17		11			4	14			5	73	.12		27					57	.09		22	61	.1		23
Gravy	.32	4.0					63	.2	2.52	75	119	.38	4.76	142	117	.37	4.68	139	65	.2	2.6	77	67	.21	2.68	80
Shredded wheat	1.7		33	.56		118	64	1.08		230	65	1.1		233	33	.56		118					63	1.07		226
Lemon pudding	.29	1.2	80	.23	.96	82	147	.42	1.76	150	135	.39	1.62	138	158	.45	1.89	161	154	.44	1.84	157	165	.47	1.98	168
Tomatoes	.2		90	.18		38	70	.14		29	90	.18		38					86	.17		36	81	.16		34
Stewed pears	.04		39			19	101			49	125	.05		61	124	.05		61	115	.05		56	116	.05		56
Blackberries	.2		196	.39		118	180	.36		108	185	.37		111	166	.33		100	184	.36		110	123	.24		74
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			1,957	15.12	82.88	2,621	1,755	15.07	81.89	2,949	2,100	18.52	186.42	4,262	1,882	13.93	153.53	3,122	1,752	14.36	125.54	3,052	1,958	16.12	130.12	3,737

DATE: AUGUST 20.

Bread	1.6	1.5	158	2.52	2.37		240	3.84	3.6		221	3.53	3.31		106	1.69	1.59		95	1.52	1.42		220	3.52	3.3	
Butter		84.0	61		51.24		90		75.6		111		93.24		79		66.36		45		37.8		83		69.72	
Sugar			57				168				117				103				116				184			
Milk	.51	3.5	700	3.57	24.5		200	1.02	7.0		200	1.02	7.0		950	4.84	33.25		200	1.02	7.0		200	1.02	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast beef	5.8	8.9	110	6.38	9.79		119	6.9	10.59		121	7.01	10.76		121	7.01	10.76		119	6.9	10.59		114	6.61	10.14	
Eggs	1.4	10.0					91	1.27	9.1		92	1.28	9.2						94	1.31	9.4		96	1.34	9.6	
Potatoes, boiled	.44		278	1.22			231	1.01			227	.99			117	.51			192	.84			194	.85		
Slaw (cabbage)	.22		28	.06			56	.12			49	.1			42	.09			65	.14			45	.09		
Baked beans	1.5	2.4	167	2.5	4.0		107	1.6	2.56		117	1.75	2.8						106	1.59	2.54		109	1.63	2.61	
Gravy	.28	17.2	180	.5	30.96		117	.32	20.12		129	.36	22.18		134	.37	23.04		140	.39	24.08		128	.35	22.01	
Corn flakes	1.0		15	.15			28	.28			29	.29			17	.17			22	.22			29	.29		
Gelatin	.34		65	.22			191	.64			197	.66			169	.57			214	.72			202	.68		
Vanilla pudding	.71	4.0	83	.58	3.32		195	1.38	7.8		174	1.23	6.96		199	1.41	7.96		196	1.39	7.84		184	1.3	7.36	
Bananas	.12		127	.15			147	.17			136	.16			129	.15			155	.18			156	.18		
Coffee			200				200												200				200			
Ice tea							400				400								400				200			
Total			2,139	18.29	146.53		2,090	18.99	156.72		2,030	18.82	175.80		2,276	17.25	163.31		1,869	16.66	121.02		2,054	18.30	152.09	

DATE: AUGUST 21.

Bread	1.5	1.5	146	2.19	2.19		234	3.51	3.51		183	2.74	2.74		119	1.78	1.78		91	1.36	1.36		213	3.19	3.19	
Butter		84.0	41		34.44		82		68.88		100		84.0		90		75.6		81		68.04		80		67.2	
Sugar			89				232				127				172				135				197			
Milk	.52	3.5	950	4.94	33.25		200	1.04	7.0		200	1.04	7.0		950	4.94	33.25		200	1.04	7.0		200	1.04	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, hash	2.7	11.0	145	3.91	15.95		92	2.48	10.12		87	2.34	9.57		88	2.37	9.68		91	2.45	10.01		91	2.45	10.01	
Meat, veal loaf	3.8	8.6	63	2.39	5.41		66	2.5	5.67		74	2.81	6.36		66	2.5	5.67		73	2.77	6.27		84	3.19	7.22	
Potatoes, boiled	.41		221	.9			155	.63			174	.71			91	.37			182	.74			190	.77		
Eggs	1.9	10.0					107	2.03	10.7		82	1.57	8.2						75	1.42	7.5		67	1.27	6.7	
Onions	.1		37				57	.06			67	.07							117	.12			65	.07		
Rice	.23		88	.2			88	.2			88	.2			100	.23			123	.28			105	.24		
Gravy	.55	4.0	201	1.1	8.04		138	.75	5.52		138	.75	5.52		133	.73	5.32		134	.73	5.36		136	.74	5.44	
Corn flakes	1.0		25	.25			57	.57			47	.47			24	.24			19	.19			36	.36		
Gelatin	.33		70	.23			195	.64			193	.63			177	.58			273	.9			226	.74		
Tomatoes	.15		128	.19			129	.19			159	.23			63	.09			160	.24			93	.13		
Peaches	.13		109	.14			136	.17			124	.16			123	.15			134	.17			129	.16		
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			2,423	16.88	119.63		2,078	15.21	131.75		1,953	14.16	143.74		2,306	14.42	151.65		1,988	12.85	125.89		2,022	14.77	127.11	

Daily food chart—Continued.

DATE: AUGUST 22.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.)				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	203	3.04	3.04		240	3.6	3.6		230	3.45	3.45		129	1.93	1.93		144	2.16	2.16		235	3.52	3.52	
Butter		84.0	82		68.88		78		65.52		125		105.0		110		92.4		81		68.04		116		97.44	
Sugar			30				205				78				112				60				142			
Milk	.5	3.5	1,300	6.5	45.5		250	1.25	8.75		250	1.25	8.75		1,150	5.75	40.25		700	3.5	24.5		250	1.25	8.75	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		50	.2	9.25		110	.44	20.35		110	.44	20.35		50	.2	9.25	
Meat, roast beef	5.1	9.4	58	2.95	5.45		64	3.26	6.01		63	3.21	5.92		64	3.26	6.01		62	3.16	5.82		67	3.41	6.29	
Eggs	1.7	10.0	27	.45	2.7		103	1.75	10.3		115	1.95	11.5		55	.93	5.5		107	1.81	10.7		85	1.44	8.5	
Potatoes, boiled	.39		73	.28			51	.19			85	.33							76	.29			111	.43		
Cream cheese	3.0	35.0	32	.96	11.2		32	.96	11.2		36	1.00	12.6						31	.93	10.85		32	.96	11.2	
Baked beans	1.5	2.4	214	3.21	5.13		220	3.3	5.28		383	5.74	9.19		130	1.95	3.12		178	2.67	4.27		223	3.34	5.35	
Gravy	.91	5.2	50	.45	2.6		49	.44	2.54		56	.5	2.91		56	.5	2.91		57	.51	2.96		60	.54	3.12	
Corn flakes	1.0		16	.16			34	.34			42	.42			36	.36							39	.39		
Lemon pudding	.35	1.2	80	.28	.96		130	.45	1.56		131	.45	1.57		124	.43	1.48		107	.37	1.28		113	.39	1.35	
Tomatoes	.13		102	.13			285	.37			144	.18			135	.17			170	.22			114	.14		
Apple sauce	.13		51	.07			172	.22											93	.12			155	.2		
Prunes	.12		153	.18			133	.16			146	.18			153	.18			140	.17			153	.18		
Cake	1.0	10.0	50	.5	5.0		58	.58	5.8		57	.57	5.7		60	.6	6.0		83	.83	8.3		70	.7	7.0	
Coffee							200												150				200			
Ice tea							400				400								200				400			
Total			2,621	19.60	170.81		2,214	17.31	140.91		1,941	19.51	175.84		2,424	16.50	179.95		2,199	17.18	159.23		2,015	17.09	161.77	

DATE: AUGUST 23.

Bread	1.5	1.5	153	2.29	2.29	428	77	1.15	1.15	216	225	3.37	3.37	630	111	1.66	1.66	311	110	1.65	1.65	308	231	3.46	3.46	647
Butter		84.0	45		37.80	351	22		18.48	172	111		93.24	867	102		85.68	797	37		31.08	289	92		77.28	719
Sugar			90			369	187			767	108			443	85			349	125			513	131			537
Milk	.49	3.5	450	2.20	15.75	302	200	.98	7.0	134	200	.98	7.0	134	700	3.43	24.5	469	200	.98	7.0	134	200	.98	7.0	134
Cream	.4	18.5	93	.37	17.2	187	93	.37	17.2	187	96	.38	17.76	193	97	.38	17.94	195	99	.39	18.31	199	96	.38	17.76	193
Meat, roast beef	5.1	10.0	104	5.30	10.4	233	102	5.20	10.2	228	153	7.8	15.3	343	114	5.81	11.4	255	129	6.57	12.9	289	120	6.12	12.0	269
Potatoes, baked	.44		210	.92		210	199	.87		199	345	1.51		345	92	.4		92	185	.81		185	217	.95		217
Gravy	.36	12.2	107	.38	13.05	219	138	.49	16.83	283	213	.76	25.98	437	118	.42	14.39	242	157	.56	19.15	322	148	.53	18.05	303
Rice	.36		61	.21		64	87	.31		91	89	.32		93	72	.25		76	82	.29		86	70	.25		74
Corn flakes	1.0		22	.22		81	31	.31		114	31	.31		114	29	.29		106	29	.29		106	41	.41		150
Tomatoes	.17		81	.13		34	82	.13		34	84	.14		35					69	.11		29	90	.15		38
Apple sauce	.05		45	.02		73	117	.05		218	144	.07		235	128	.06		209	161	.08		262	159	.07		259
Bananas	.12		120	.14		112	134	.16		125	159	.18		148	130	.15		121	137	.16		127	128	.15		119
Muskmelon	.08		89	.07		36	157	.12		64	131	.1		54	104	.08		43	158	.12		65	142	.11		58
Gelatin	.28		127	.35		17	152	.42		20	154	.43		20	160	.44		21	123	.34		16	126	.35		16
Coffee			200				200												150				200			
Ice tea							200				200								200				200			
Total			1,797	12.60	96.49	2,716	1,778	10.56	70.86	2,852	2,243	16.35	162.65	4,091	2,042	13.37	155.57	3,286	1,801	12.35	90.09	2,930	1,991	13.91	135.55	3,733

DATE: AUGUST 24.

Bread	1.5	1.5	210	3.15	3.15		233	3.49	3.49		262	3.93	3.93		129	1.93	1.93		164	2.46	2.46		218	3.27	3.27	
Butter		84.0	69		57.96		107		89.88		142		119.28		118		99.12		77		64.68		73		61.32	
Sugar			36				191				88				91				63				133			
Milk	.5	3.5	870	4.35	30.45		200	1.0	7.0		200	1.0	7.0		950	4.75	33.25		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	94	.37	17.39		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2	
Meat, roast beef	6.1	13.8	48	2.92	6.62		54	3.29	7.45		60	3.66	8.28		57	3.47	7.86		57	3.47	7.86		58	3.53	8.0	
Meat, hash	2.4	3.4	105	2.52	3.57		115	2.76	3.91		141	3.38	4.79		120	2.88	4.08		130	3.12	4.42		132	3.16	4.48	
Potatoes, baked	.43		257	1.10			259	1.11			329	1.41							179	.76			282	1.21		
Eggs	1.6	10.0					104	1.66	10.4		95	1.52	9.5						96	1.53	9.6		92	1.47	9.20	
Baked beans	1.2	2.4	135	1.62	3.24		111	1.33	2.66		128	1.53	3.07						105	1.26	2.52		121	1.45	2.90	
Gravy	.42	4.0	56	.23	2.24		62	.26	2.48		63	.26	2.52		65	.27	2.6		60	.25	2.4		67	.28	2.68	
Sliced tomatoes	.13		99	.12			125	.16			93	.12			59	.07			117	.15			103	.13		
Peach custard	.76	4.0	125	.95	5.0		180	1.36	7.20		202	1.53	8.08		181	1.37	7.24		212	1.61	8.48		209	1.58	8.36	
Blackberries	.23		117	.26			135	.31			133	.3			127	.29			136	.31			136	.31		
Shredded wheat	1.7		30	.51			61	1.03			32	.54			31	.52							62	1.05		
Gelatin	.28		83	.23			98	.27			88	.24			91	.25			94	.26			88	.24		
Cottage cheese	3.0	2.2	64	1.92	1.40						81	2.43	1.78						86	2.58	1.89		66	1.98	1.45	
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			2,399	20.25	131.02		2,155	18.51	156.67		2,257	22.33	190.43		2,139	16.28	178.28		1,896	19.24	133.51		2,160	21.14	130.86	

Daily food chart—Continued.

DATE: AUGUST 25.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	141	2.11	2.11		158	2.37	2.37		231	3.46	3.46		140	2.1	2.1		134	2.01	2.01		214	3.21	3.21	
Butter		84.0	43		36.12		57		47.88		125		105.0		113		94.92		28		23.52		72		60.48	
Sugar			75				283				75				133				118				164			
Milk	.5	3.5	700	3.50	24.5		200	1.0	7.0		200	1.0	7.0		950	4.75	33.25						200	1.0	7.0	
Cream	.4	18.5	180	.72	33.3		120	.48	22.2		60	.24	11.1		120	.48	22.2		120	.48	22.2		120	.48	22.2	
Meat, roast pork	5.0	16.6	47	2.35	7.8		59	2.95	9.79		53	2.65	8.79		58	2.90	9.62		60	3.0	9.96		57	2.85	9.46	
Meat, roast ham	4.9	25.3	69	3.38	17.45		73	3.57	18.46		105	5.14	26.56		76	3.72	19.22		78	3.82	19.73		72	3.52	18.21	
Potatoes, boiled	.28		276	.77			221	.61			259	.72			98	.27			273	.76			345	.96		
Eggs	1.2	10.0					55	.66	5.5		59	.7	5.9						86	1.03	8.6		66	.79	6.6	
Gravy	.2	3.4	113	.22	3.84		128	.25	4.35		133	.26	4.52		159	.31	5.4		221	.44	7.51		144	.28	4.89	
Tomatoes	.13		150	.19			181	.23			183	.23			76	.09			227	.29			185	.24		
Rice	.26		81	.21			107	.27			105	.27			101	.26			106	.27			123	.31		
Shredded wheat	1.7		34	.57			66	1.12			66	1.12			33	.56							67	1.13		
Bananas	.12		122	.14			157	.18							142	.17			142	.17			114	.13		
Muskmelon	.08		138	.11			135	.11			159	.12			95	.07			109	.08			123	.09		
Chocolate pudding	.85	1.4	39	.33	.54		115	.97	1.61		106	.9	1.48		116	.98	1.62		130	1.1	1.82		121	1.02	1.69	
Coffee			200				200												150				200			
Ice tea							400				400								230				400			
Total			2,208	14.60	125.66		2,115	14.77	119.16		1,919	16.81	173.81		2,410	16.66	188.33		1,832	13.45	95.35		2,187	16.01	133.74	

DATE: AUGUST 26.

Bread	1.5	1.5	55	.82	.82	154	154	2.31	2.31	431	169	2.53	2.53	473	175	2.62	2.62	490	130	1.95	1.95	364	240	3.6	3.6	672
Butter		84.0	29		24.36	226	69		57.96	539	105		88.2	820	169		141.96	473	86		72.24	241	96		80.64	269
Sugar			48			197	209			857	107			439	156			640	105			431	160			656
Milk	.53	3.5					200	1.06	7.0	134	200	1.06	7.0	134	950	5.03	33.25	637					200	1.06	7.0	134
Cream	.4	18.5	110	.44	20.35	221	160	.64	29.60	322	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322
Meat, roast beef	5.2	10.0					62	3.22	6.2	140	62	3.22	6.2	140	67	3.48	6.7	151	65	3.38	6.5	147	67	3.48	6.7	151
Eggs	1.9	10.0					101	1.91	10.10	143	118	2.24	11.8	168					120	2.28	12.0	170	111	2.1	11.1	158
Potatoes, baked	.44		97	.42		97	142	.62		142	244	1.07		244					88	.38		88	216	.95		216
Potatoes sweet (baked)	.44						111	.49		139	123	.54		154	76	.33		95	129	.56		161	145	.63		181
Gravy	.42	5.5					72	.3	3.96	45	69	.28	3.79	43	74	.31	4.07	46	134	.56	7.37	83	68	.25	3.74	42
Tomatoes	.24						85	.2		37	76	.18		33					91	.21		40	77	.18		34
Baked beans	1.3	1.8	181	2.35	3.25	244	198	2.57	3.56	267	206	2.67	3.7	278	189	2.45	3.4	255	207	2.69	3.72	279	202	2.62	3.63	273
Peaches	.13		75	.09		71	128	.16		120	119	.15		112	122	.15		115	175	.22		165	135	.17		127
Cottage cheese	3.7	2.2					31	1.14	.68	35	32	1.18	.7	36					38	1.4	.83	43	34	1.25	.74	38
Shredded wheat	1.7						65	1.1		233	64	1.08		230	30	.51		108					65	1.1		233
Peach gelatin	.22		18			2	152	.33		20	188	.41		24	125	.27		16	120	.26		16	102	.22		13
Chocolate		.5					90		.45	4	86		.43	4	86		.43	4	114		.57	5	102		.51	5
Coffee			240				200				200								150				200			
Ice tea							400				400								360				400			
Total			613	4.12	48.78	1,212	1,939	15.60	121.82	3,608	1,962	17.25	153.95	3,654	2,293	15.79	222.03	3,352	1,648	14.53	134.78	2,555	2,078	18.25	147.26	3,524

DATE: AUGUST 27.

Bread	1.6	1.5	146	2.33	2.19		246	3.93	3.69		265	4.24	3.97		64	1.02	.96		116	1.85	1.74		213	3.4	3.19	
Butter		84.0	55		46.2		79		66.36		137		115.08		59		49.56		52		43.68		88		73.92	
Sugar			68				151				99				112				102				180			
Milk	.53	3.5	700	3.71	24.5		200	1.06	7.0		200	1.06	7.0		950	5.03	33.25		200	1.06	7.0		200	1.06	7.0	
Cream	.4	18.5	160	.64	29.6		160	.64	29.6		160	.64	29.6		220	.88	40.7		160	.64	29.6		100	.4	18.5	
Meat, pork roast	5.2	21.4	47	2.44	10.05		48	2.49	10.27		53	2.75	11.34		55	2.86	11.77		57	2.96	12.19		57	2.96	12.19	
Meat, roast beef	5.8	8.5	66	3.82	5.61		68	3.94	5.78		62	3.59	5.27		71	4.11	6.03		72	4.17	6.12		67	3.88	5.69	
Potatoes, baked	.42		243	1.02			224	.94			236	.99			49	.2			180	.75			220	.92		
Cream omelet	1.5	10.0					77	1.15	7.70		92	1.38	9.2						93	1.39	9.3		129	1.93	12.9	
Slaw	.24		24	.07			59	.14			57	.13							87	.2			43	.1		
Baked beans	1.4	2.4	108	1.51	2.59		126	1.76	3.02		134	1.87	3.21						127	1.77	3.04		122	1.7	2.92	
Gravy	.49	4.1	123	.6	5.04		133	.65	5.45		137	.67	5.61		143	.7	5.86		149	.73	6.1		151	.73	6.19	
Corn flakes	1.0		25	.25			57	.57			51	.51			29	.29			34	.34			43	.43		
Gelatin	.23		81	.18			121	.27			140	.32			140	.32			121	.27			143	.32		
Baked apple pudding	.56	4.0	76	.42	3.04		119	.66	4.76		147	.82	5.88		154	.86	6.16		141	.78	5.64		172	.96	6.88	
Cantaloupe	.08		178	.14			181	.14			86	.06			149	.12			134	.1			112	.09		
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			2,100	17.13	128.82		2,049	18.34	143.63		2,052	19.03	196.16		2,195	16.39	154.29		1,825	17.01	124.41		2,040	18.88	149.38	

Daily food chart—Continued.

DATE: AUGUST 28.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject III (A. G.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject V (A. M. N.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	179	2.68	2.68		267	4.0	4.0		268	4.02	4.02		132	1.98	1.98		140	2.1	2.1		261	3.91	3.91	
Butter		84.0	61		51.24		86		72.24		140		117.6		93		78.12		42		35.28		86		72.24	
Sugar			35				177				60				94				98				142			
Milk	.5	3.5	450	2.25	15.75		200	1.0	7.0						700	3.5	24.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	60	.24	11.1		60	.24	11.1		60	.24	11.1		60	.24	11.1		60	.24	11.1		35	.14	6.47	
Meat, roast beef	5.5	12.1	113	6.21	13.67		118	6.49	14.27		125	6.87	15.12		80	4.4	9.68		110	6.05	13.31		131	7.2	15.85	
Eggs	1.5	10.0	12	.18	1.2		80	1.2	8.0		101	1.51	10.1						86	1.29	8.6		95	1.42	9.5	
Potatoes, boiled	.36		236	.84			238	.85			249	.89			58	.2			215	.77			225	.81		
Gravy	.32	8.5	124	.39	10.54		127	.4	10.79		128	.4	10.88		130	.41	11.05		131	.41	11.13		132	.42	11.22	
Tomatoes	.13		110	.14			197	.25			201	.26			111	.14			211	.27			123	.15		
Peaches	.13		146	.18			201	.26			178	.23			62	.08			225	.29			172	.22		
Corn soup	.27	1.0	242	.65	2.42		215	.58	2.15		260	.7	2.6		236	.63	2.36		190	.51	1.9		241	.65	2.41	
Corn flakes	1.0		21	.21			53	.53							31	.31			39	.39			64	.64		
Apple tapioca pud-ding	.41	2.0	48	.19	.96		254	1.04	5.08		294	1.2	5.88		141	.57	2.82		302	1.23	6.04		320	1.31	6.40	
Coffee			200				200												150				200			
Ice tea							200				200								400				200			
Total			1,827	14.16	109.56		2,273	16.84	134.63		2,064	16.32	177.30		1,928	12.46	141.61		2,049	14.55	96.46		2,227	17.87	135.00	

DATE: AUGUST 29.

Bread	1.5	1.5	139	2.08	2.08		209	3.13	3.13		251	3.76	3.76		139	2.08	2.08		117	1.75	1.75		227	3.4	3.4	
Butter		84.0	63		52.92		72		60.48		137		115.08		114		95.76		67		56.28		86		72.24	
Sugar			49				163				94				90				84				138			
Milk	.5	3.5	800	4.0	28.0		200	1.0	7.0		200	1.0	7.0		1,150	5.75	40.25		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75	
Meat, Hamburger steak	4.1	4.7	161	6.6	7.56		111	4.55	5.21		117	4.79	5.49		105	4.3	4.93		111	4.55	5.21		111	4.55	5.21	
Eggs	1.4	10.0					100	1.4	10.0		116	1.62	11.6						122	1.7	12.2		121	1.69	12.1	
Potatoes, baked	.41		128	.52			126	.51			129	.52			86	.35			118	.48			97	.39		
Potatoes, sweet (boiled)	.15		110	.16			107	.16			110	.16			67	.1			101	.15			102	.15		
Rice	.34		68	.23			105	.35			97	.32			95	.32			102	.34			96	.32		
Baked beans	1.4	1.7	231	3.23	3.92		216	3.02	3.67		276	3.86	4.69		127	1.77	2.15		187	2.57	3.17		236	3.3	4.01	
Gravy	.24	2.4	54	.12	1.29		57	.13	1.36		69	.16	1.65		55	.13	1.32		65	.15	1.56		63	.15	1.51	
Corn flakes	1.0		17	.17			35	.35			29	.29			29	.29							44	.44		
Baked apple pudding	.6	4.0	67	.4	2.68		111	.66	4.44		160	.96	6.40		136	.81	5.44		194	1.16	7.76		161	.96	6.44	
Cantaloupe	.08		64	.05			88	.07			56				62	.05			108	.08			52			
Coffee			200				200												150				200			
Ice tea							400				400								400				200			
Total			2,101	18.16	126.20		1,850	15.93	123.04		1,991	18.04	183.42		2,405	16.55	179.68		1,726	14.53	122.68		1,884	16.95	139.66	

DATE: AUGUST 30.

Bread	1.5	1.5	133	1.89	1.89		106	1.59	1.59		191	2.86	2.86		128	1.92	1.92		122	1.83	1.83		241	3.61	3.61	
Butter		84.0	59		49.56		45		37.8		108		90.72		87		73.08		50		42.0		102		85.68	
Sugar			50				147				87				133				102				155			
Milk	.5	3.5	700	3.5	24.5		200	1.0	7.0		200	1.0	7.0		950	4.75	33.25		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		160	.64	29.6		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast beef	5.6	6.6	41	2.29	2.7		40	2.24	2.64		62	3.47	4.09		40	2.24	2.64		39	2.18	2.57		41	2.29	2.7	
Meat, veal	4.4	4.3	54	2.37	2.32		55	2.42	2.36		58	2.55	2.49		54	2.37	2.32		64	2.81	2.75		61	2.68	2.62	
Potatoes, baked	.42		209	.87			209	.87			209	.87							198	.83			231	.97		
Baked beans	1.3	1.7	200	2.6	3.4		110	1.43	1.87		201	2.61	3.41						131	1.7	2.22		127	1.65	2.15	
Gravy	.21	2.1	122	.25	2.56		125	.26	2.62		160	.33	3.36		127	.26	2.66		125	.26	2.62		138	.28	2.89	
Corn flakes	1.0		20	.2			37	.37			30	.3			32	.32			21	.21			45	.45		
Custard	.88	4.0	98	.86	3.92		104	91	4.16		103	.9	4.12		106	.93	4.24		105	.92	4.2		106	.93	4.24	
Prunes	.12		113	.13			104	.12			226	.25			117	.14			110	.13			117	.14		
Tomatoes	.13		102	.13			90	.11			102	.13			118	.15			90	.11			89	.11		
Peaches	.13		105	.13			83	.1			118	.15			118	.15			97	.12			95	.12		
Cantaloupe	.08		95	.07			112	.08			143	.11			93	.07			13				110	.08		
Coffee			200				200												150				200			
Ice tea							400				400								550				400			
Total			2,211	15.73	111.20		1,677	11.94	80.39		2,158	16.17	147.65		2,213	13.74	140.46		1,578	12.54	85.54		1,968	14.75	131.24	

Daily food chart—Continued.

DATE: AUGUST 31.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	210	3.15	3.15	588	210	3.15	3.15	588	227	3.4	3.4	636	119	1.78	1.78	333	109	1.63	1.63	305	177	2.65	2.65	518
Butter	.....	84.0	64	......	53.76	500	70	......	58.8	547	127	......	106.68	992	92	......	77.28	719	36	......	30.24	281	79	......	66.36	617
Sugar	.....	.....	48	......	......	197	180	......	......	738	97	......	......	398	33	......	......	135	121	......	......	496	136	......	......	558
Milk	.5	3.5	700	3.5	24.5	469	300	1.5	10.5	201	200	1.0	7.0	134	700	3.5	24.5	469	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322
Meat, hash	3.3	11.0	75	2.47	8.25	86	78	2.57	8.58	90	74	2.44	8.14	85	78	2.57	8.58	90	85	2.8	9.35	98	78	2.57	8.58	90
Meat, roast beef	4.7	10.0	66	3.1	6.6	141	62	2.91	6.2	132	64	3.0	6.4	136	69	3.24	6.9	147	65	3.05	6.5	138	59	2.77	5.9	126
Potatoes, baked	.42	.....	247	1.03	......	247	225	.94	......	225	306	1.28	......	306	110	.46	......	110	189	.79	......	189	228	.95	......	228
Eggs	2.3	10.0	.....	......	......	......	69	1.58	6.9	105	72	1.65	7.2	109	.....	......	......	......	78	1.79	7.8	119	47	1.08	4.7	71
String beans	.27	.....	57	.15	......	13	80	.21	......	18	54	.14	......	12	.....	......	......	......	17	......	......	4	74	.19	......	16
Corn flakes	1.0	.....	19	.19	......	70	64	.64	......	235	27	.27	......	99	39	.39	......	143	21	.21	......	77	35	.35	......	128
Gravy	.34	4.0	123	.41	4.92	57	133	.45	5.32	61	137	.46	5.48	63	129	.43	5.16	59	207	.7	8.28	95	132	.44	5.28	61
Banana pudding	.7	1.2	109	.76	1.31	97	133	.93	1.60	118	157	1.09	1.88	140	167	1.16	2.0	149	160	1.12	1.92	142	157	1.09	1.38	140
Dates	.2	.....	58	.11	......	206	66	.13	......	234	71	.14	......	252	79	.15	......	280	77	.15	......	273	77	.15	......	273
Tomatoes	.13	.....	60	.07	......	14	104	.13	......	24	76	.09	......	17	.....	......	......	......	114	.14	......	26	93	.12	......	21
Pears	.07	.....	.....	......	......	......	158	.11	......	77	177	.12	......	87	.....	......	......	......	154	.11	......	75	140	.09	......	69
Cocoa	.....	.5	200	......	1.0	......	200	......	1.0	......	.....	......	......	......	.....	......	......	......	200	......	1.0	......	200	......	1.0	......
Ice tea	.....	.....	.....	......	......	......	400	......	......	......	400	......	......	......	.....	......	......	......	400	......	......	......	310	......	......	......
Total	.....	.....	1,996	15.58	133.09	3,007	2,092	15.89	131.65	3,715	2,076	15.72	175.78	3,788	1,774	14.32	155.8	2,956	1,793	14.13	102.32	2,774	1,872	14.09	131.95	3,372

DATE: SEPTEMBER 1.

Bread	1.5		210	3.15			139	2.08			236	3.54			116	1.74			118	1.77			235	3.52		
Butter			63				86				144				87				53				93			
Sugar			68				175				113				54				71				108			
Milk	.5		750	3.75			200	1.0			200	1.0			890	4.45			80	.4			200	1.0		
Cream	.4		60	.24			60	.24			60	.24			60	.24			60	.24			60	.24		
Meat, roast beef	4.7		118	5.54			136	6.39			173	8.13			124	5.82			128	6.01			137	6.43		
Eggs	2.2		40	.88			53	1.16			51	1.12							46	1.01			51	1.12		
Potatoes, boiled	.39		239	.93			266	1.03			345	1.34			106	.41			246	.95			289	1.12		
Onions	.1		47	.05							79	.08							99	.1			91	.09		
Gravy	.31		115	.35			116	.35			124	.38			117	.36			135	.41			129	.39		
String beans	.27		41	.11			46	.13			57	.15							51	.14			45	.12		
Shredded wheat	1.7		29	.49			61	1.03			65	1.1			33	.56							62	1.05		
Vanillacream pudding	.69		173	1.19			207	1.42			227	1.56			248	1.71			256	1.76			248	1.71		
Bananas	.12		118	.14			74	.08			93	.11			123	.14			123	.14			116	.13		
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			2,071	16.82			1,619	14.91			1,967	18.75			1,958	15.43			1,466	12.93			1,864	16.92		

DATE: SEPTEMBER 2.

Bread	1.5		175	2.62			171	2.56			214	3.21			136	2.04			185	2.77			212	3.18		
Butter			56				72				134				85				74				83			
Sugar			53				174				101				161				158				156			
Milk	.5		630	3.15			200	1.0			200	1.0			860	4.3			200	1.0			200	1.0		
Cream	.4		110	.44			110	.44			110	.44			110	.44			110	.44			110	.44		
Meat, lamb	4.5		71	3.19			73	3.28			73	3.28			77	3.46			78	3.51			81	3.64		
Eggs	1.6		25	.4			99	1.58			93	1.48							87	1.39			104	1.66		
Potatoes, boiled	.39		228	.88			145	.56			231	.9			62	.24			132	.51			284	1.1		
Baked beans	1.3		207	2.69			203	2.63			319	4.14			145	1.88			193	2.5			218	2.83		
Gravy	.42		58	.24			63	.26			131	.55			63	.26			65	.27			61	.25		
Grape nuts	1.8		53	.95			69	1.24							81	1.45			36	.64			83	1.49		
Tomatoes	.13		129	.16			218	.28			267	.34			143	.18			231	.3			236	.3		
Gelatin	.27		102	.27			138	.37			168	.45			147	.39			149	.4			142	.38		
Peaches	.13		129	.16			158	.2			150	.19			138	.17			205	.26			149	.19		
Apple sauce	.13		88	.11			169	.21			139	.18			151	.2			153	.2			140	.18		
Coffee			200				200				200								200				200			
Ice tea							400				400								400				400			
Total			2,114	15.26			2,062	14.61			2,330	16.16			2.365	15.01			2,056	14.19			2,259	16.64		

Daily food chart—Continued.

DATE: SEPTEMBER 3.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.6		200	3.2			219	3.5			226	3.61			98	1.56			156	2.49			270	4.32		
Butter			57				85				145				122				65				105			
Sugar			48				144				76				54				85				138			
Milk	.5		650	3.25			400	2.0			200	1.0			900	4.5			200	1.0			200	1.0		
Cream	.4		100	.4			100	.4			100	.4			100	.4			100	.4			100	.4		
Meat, roast beef	5.3		139	7.36			137	7.21			148	7.84			149	7.89			147	7.79			148	7.84		
Eggs	1.8						80	1.44			86	1.54							85	1.53			87	1.56		
Potatoes, baked	.41		314	1.28			292	1.19			458	1.87			104	.42			220	.9			242	.99		
Turnips	.12		64	.07			73	.08			73	.08							71	.08			85	.1		
Baked beans	1.3		133	1.72			48	.62			138	1.79			90	1.17			68	.88			112	1.45		
Gravy	.24		125	.3			138	.33			131	.31			138	.33			147	.35			123	.29		
Corn flakes	1.0		15	.15			77	.77			30	.3			31	.31			32	.32			40	.4		
Custard	.84		72	.6			182	1.52			249	2.09			169	1.41			281	2.36			158	1.32		
Muskmelon	.08		71	.06			109	.08			80	.06			66	.05			106	.08			96	.08		
Apple sauce	.13		134	.17			129	.16			177	.23			141	.18			180	.23			184	.23		
Coffee			200				200												200				200			
Ice tea							400				400								400				400			
Total			2,122	18.56			2,273	19.35			2,317	21.12			2,162	18.22			1,943	18.41			2,088	19.98		

DATE: SEPTEMBER 4.

Bread	1.5		201	3.01			194	2.91			247	3.7			90	1.35			116	1.74			265	3.97		
Butter			49				79				147				127				53				106			
Sugar			88				224				97				159				141				148			
Milk	.5		650	3.25			250	1.25			250	1.25			650	3.25			250	1.25			250	1.25		
Cream	.4		180	.72			170	.68			170	.68			170	.68			170	.68			170	.68		
Meat, roast pork	4.6		65	2.99			72	3.31			66	3.03			70	3.22			70	3.22			74	3.4		
Meat, hash	3.5		89	3.11			88	3.08			95	3.32			89	3.11			91	3.18			91	3.18		
Potatoes, boiled	.35		157	.54			150	.52			194	.67							82	.28			141	.49		
Potatoes, baked, sweet	.27		130	.35			176	.47			201	.54			113	.3			177	.47			160	.43		
Eggs	1.7		24	.4			84	1.42			101	1.71							85	1.44			63	1.07		
Boiled beans	.79		104	.82			131	1.03			103	.81							132	1.04			98	.77		
Rice	.22		101	.22			86	.18											81	.17			75	.16		
Gravy	.54		127	.68			130	.7			136	.73			118	.63			196	1.05			131	.7		
Corn flakes	1.0		36	.36			59	.59			44	.44			28	.28			36	.36			54	.54		
Apple tapioca pudding	.71		67	.47			225	1.59			256	1.81			254	1.8			214	1.51			287	2.03		
Peaches	.13		129	.16			153	.19			137	.17			178	.23			178	.23			149	.19		
Coffee							200												150				250			
Ice tea							500				400								400				400			
Total			2,197	17.08			2,271	17.92			2,244	18.86			2,046	14.85			2,072	16.62			2,262	18.86		

DATE: SEPTEMBER 5.

Bread	1.5		175	2.62			209	3.13			253	3.79			108	1.62			161	2.41			259	3.88		
Butter			67				69				137				124				101				109			
Sugar			34				159				69				118				86				116			
Milk	.5		650	3.25			200	1.0			200	1.0			900	4.5			200	1.0			200	1.0		
Cream	.4		110	.44			82	.32			110	.44			110	.44			110	.44			110	.44		
Meat, veal	5.0		59	2.95			62	3.1			63	3.15			66	3.3			65	3.25			69	3.45		
Potatoes, boiled	.33		123	.4			90	.29			150	.49							94	.31			134	.44		
Potatoes, boiled, sweet	.18		111	.19			110	.19			135	.24			100	.18			156	.28			124	.22		
Baked beans	1.4		262	3.66			187	2.61			296	4.14			76	1.06			216	3.02			203	2.84		
Corn meal mush	1.9						244	4.63			244	4.63			183	3.47			81	1.53			210	3.99		
Gravy	.69		100	.69			122	.84			129	.89			69	.47			151	1.04			131	.9		
Eggs	1.6						86	1.37			92	1.47							99	1.58			74	1.18		
Chocolate pudding	.8						153	1.22			169	1.35			124	.99			121	.96			126	1.0		
Sliced tomatoes	.13		49	.06			223	.29			246	.32			114	.15			223	.29			145	.19		
Cantaloupe	.08		157	.12			129	.1			104	.08			133	.1			220	.17			155	.12		
Stewed pears	.07		45				123	.09			108	.07			81	.06			110	.08			118	.08		
Coffee			200				200												150				200			
Ice tea							400				400								400				400			
Total			1,942	14.38			2,248	19.18			2,505	22.06			2,306	16.34			2,194	16.36			2,283	19.73		

Daily food chart—Continued.

DATE: SEPTEMBER 6.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Subject I Nitrogen.	Subject I Ether extract.	Subject I Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Subject II Nitrogen.	Subject II Ether extract.	Subject II Estimated fuel value.	Subject III (A. G.). Amount of food.	Subject III Nitrogen.	Subject III Ether extract.	Subject III Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Subject IV Nitrogen.	Subject IV Ether extract.	Subject IV Estimated fuel value.	Subject V (A. M. N.). Amount of food.	Subject V Nitrogen.	Subject V Ether extract.	Subject V Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Subject VI Nitrogen.	Subject VI Ether extract.	Subject VI Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.3		156	2.02			97	1.26			124	1.61			123	1.59			196	2.54			255	3.31		
Butter			51				39				69				96				60				101			
Sugar			72				124				84				139				103				133			
Milk	.5		650	3.25							200	1.0			900	4.5			200	1.0			200	1.0		
Cream	.4		110	.44			110	.44			110	.44			110	.44			120	.48			110	.44		
Meat, veal	4.9		65	3.18			70	3.43			72	3.52			69	3.38			76	3.72			73	3.57		
Meat, roast beef	5.5		64	3.52			64	3.52			63	3.46			68	3.74			60	3.3			66	3.63		
Potatoes, baked	.44		125	.55			118	.51			144	.63							109	.47			67	.29		
Potatoes, boiled, sweet	.18		105	.18			104	.18			104	.18							89	.16			79	.14		
Corn soup	.3		213	.63			184	.55			204	.61			167	.5			178	.53			178	.53		
Tomatoes	.13		64	.08			116	.15			105	.13			37				109	.14			92	.11		
Bananas	.12		174	.2			87	.1			154	.18			173	.2			170	.2			161	19		
Corn flakes	1.0		19	.19			73	.73			31	.31			30	.3			23	.23			76	.76		
Gravy	.5		120	.6			123	.61			133	.67			127	.63			210	1.05			139	.69		
Baked beans	1.3		155	2.01							152	1.97							109	1.41			130	1.69		
Cantaloupe	.08		121	.09			92	.07			67	.05			90	.07			115	.09			85	.06		
Banana pudding	.31		55	.17			165	.51			185	.57			174	.53			190	.58			189	.58		
Chocolate pudding	.8						84	.67			68	.54			82	.65			83	.66			85	.68		
Coffee			200				210												150				200			
Ice tea							400				400								250				400			
Total			2,319	17.11			1,650	12.73			2,069	15.87			2,385	16.53			2,200	16.56			2,219	17.67		

DATE: SEPTEMBER 7.

Bread	1.5	1.5	136	2.04	2.04	381	166	2.49	2.49	465	245	3.67	3.67	686	93	1.39	1.39	260	97	1.45	1.45	272	231	3.46	3.46	647
Butter		84.0	40		33.6	312	58		48.72	451	123		103.32	961	66		55.44	515	42		35.28	328	98		82.32	765
Sugar			83			340	194			795	86			353	138			566	172			705	59			242
Milk	.5	3.5	400	2.0	14.0	268	200	1.0	7.0	134	200	1.0	7.0	134	1,050	5.25	36.75	704	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221
Meat, roast beef	5.4	10.0	111	5.99	11.1	256	116	6.26	11.6	268	116	6.26	11.6	268	118	6.37	11.8	273	120	6.48	12.0	277	130	7.02	13.0	300
Eggs	1.6	10.0					91	1.45	9.1	122	120	1.92	12.0	161					100	1.6	10.0	134	110	1.76	11.0	147
Potatoes, boiled	.39		246	.95		246	103	.4		103	220	.85		220	30	.11		30	189	.73		189	232	.9		232
Slaw	.24		29	.07		8													70	.17		19	28	.07		8
Gravy	.17	4.0	132	.22	5.28	55	128	.21	5.12	54	124	.21	4.96	52	132	.22	5.28	55	137	.23	5.48	58	133	.22	5.32	56
Corn flakes	1.0		19	.19		70	73	.73		268	26	.26		95	23	.23		84	24	.24		88	43	.43		158
Custard	.88	4.5	84	.73	3.78	155	161	1.41	7.24	296	181	1.59	8.14	333	190	1.67	8.55	350	225	1.98	10.12	414	169	1.48	7.6	311
Baked apple pudding	.65	4.0	104	.67	4.16	93	118	.76	4.72	105	127	.82	5.08	113	128	.83	5.12	114	155	1.0	6.20	138	96	.62	3.84	85
Peaches	.13		151	.19		142	155	.2		146	173	.22		163	194	.25		182	185	.24		174	206	.26		194
Tomatoes	.13		18			4	115	.14		26	101	.13		24					98	.12		23	101	.13		23
Coffee			200				200												150				200			
Ice tea							200				200								200				200			
Total			1,663	13.49	94.31	2,551	1,788	15.49	116.34	3,454	1,955	17.37	176.12	3,784	2,272	16.76	144.68	3,354	1,924	15.68	107.88	3,174	1,946	17.79	153.89	3,523

DATE: SEPTEMBER 8.

Bread	1.5	1.5	197	2.95	2.95		181	2.71	2.71		198	2.97	2.97		86	1.29	1.29		101	1.5	1.5		194	2.91	2.91	
Butter		84.0	62		52.08		72		60.48		106		89.04		84		70.56		56		47.04		117		98.28	
Sugar			110				150				118				109				168				119			
Milk	.5	3.5	650	3.25	22.75		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast beef	4.9	15.0	57	2.79	8.55		64	3.13	9.6		61	2.98	9.15		62	3.03	9.3		69	3.38	10.35		66	3.23	9.9	
Meat, hash	4.6	9.6	74	3.4	7.1		71	3.26	6.81		74	3.4	7.1		78	3.58	7.48		71	3.26	6.81		81	3.72	7.77	
Potatoes, boiled	.33		117	.38			114	.37			105	.34							113	.37			117	.38		
Potatoes, baked, sweet	.27		136	.36			110	.29			194	.52			97	.26			175	.47			189	.51		
Gravy	.4	3.0	140	.56	4.2		132	.52	3.96		139	.55	4.17		132	.52	3.96		141	.56	4.23		139	.55	4.17	
Scalloped tomatoes	.2		92	.18			273	.54			272	.54							331	.66			259	.51		
Eggs	1.5	10.0					126	1.89	12.6		104	1.71	11.4						100	1.5	10.0		99	1.48	9.9	
Corn flakes	1.0		23	.23			85	.85			49	.49			26	.26			26	.26			77	.77		
Apple custard	.5	4.0	13	.06	.52		121	.6	4.84		138	.69	5.52		142	.71	5.68		173	.86	6.92		151	.75	6.04	
Gelatin	.39		113	.44			142	.55			169	.65			162	.63			163	.63			129	.49		
Peaches	.13		154	.2			174	.22			179	.23			113	.14			194	.25			184	.23		
Coffee			200				200												150				200			
Ice tea							400				400								400				600			
Total			2,048	15.24	118.50		2,825	16.37	128.35		2,226	16.51	156.70		2,101	15.36	150.12		2,191	15.14	114.2		2,231	16.97	166.32	

Daily food chart—Continued.

DATE: SEPTEMBER 9.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	151	2.26	2.26		142	2.13	2.13		215	3.22	3.22		70	1.05	1.05		75	1.12	1.12		163	2.44	2.44	
Butter		84.0	72		60.48		71		59.64		141		118.44		59		49.56		66		55.44		102		85.68	
Sugar			56				188				82				82				67				90			
Milk	.5	3.5	650	3.25	22.75		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		450	2.25	15.75		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, sausage	3.0	3.3	88	2.64	2.9		100	3.0	3.3		102	3.06	3.36		104	3.12	3.43		113	3.39	3.72		112	3.36	3.69	
Eggs	1.5	10.0					93	1.39	9.3		92	1.38	9.2						91	1.36	9.1		113	1.69	11.3	
Potatoes, baked, sweet	.27		294	.79			160	.43			203	.54			65	.17			186	.5			273	.73		
Baked beans	1.3	3.6	217	2.82	7.81		208	2.7	7.48		269	3.49	9.68		135	1.75	4.86		174	2.26	6.26		208	2.7	7.48	
Lima beans	1.0		32	.32			91	.91			71	.71														
Gravy	.59	4.0	59	.34	2.36		63	.37	2.52		67	.39	2.68		50	.29	2.0		73	.43	2.92		69	.4	2.76	
Corn flakes	1.0		22	.22			70	.7			33	.33			25	.25			18	.18			68	.68		
Corn bread	1.2	5.0	16	.19	.8		67	.8	3.35		72	.86	3.6						71	.85	3.55		72	.86	3.6	
Muskmelon	.08		183	.14			172	.13			146	.11			148	.11			171	.13			155	.12		
Bananas	.12		130	.15			159	.19			156	.18			151	.18			150	.18			139	.16		
Apple sauce	.13		69	.09			157	.2			160	.21			175	.25			176	.25			151	.2		
Coffee			200				200												150				200			
Ice tea							400				400								200				200			
Total			2,149	13.65	119.71		2,051	14.50	115.07		2,119	15.92	177.53		2,054	12.11	112.75		1,990	13.34	118.21		2,025	14.78	144.30	

DATE: SEPTEMBER 10.

Bread	1.5	1.5	141	2.11	2.11	395	96	1.44	1.44	269	206	3.09	3.09	577	97	1.45	1.45	272	80	1.2	1.2	224	155	2.32	2.32	434
Butter		84.0	47		39.48	367	54		45.36	422	94		78.96	734	73		61.32	570	52		43.68	406	79		66.36	617
Sugar			70			312	154			631	87			357	103			422	130			533	97			398
Milk	.5	3.5	700	3.5	24.5	469	200	1.0	7.0	134	200	1.0	7.0	134	950	4.75	33.25	637	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	150	.6	27.75	302	150	.6	27.75	302	150	.6	27.75	302	150	.6	27.75	302	150	.6	27.75	302	150	.6	27.75	302
Meat, roast beef	4.7	9.5	84	3.94	7.98	176	87	4.08	8.26	182	90	4.23	8.55	188	96	4.51	9.12	201	90	4.23	8.55	188	92	4.32	8.74	192
Meat, Hamburger steak	4.0	6.9	104	4.16	7.17	174	106	4.24	7.31	177	100	4.0	6.9	167	111	4.44	7.65	185	112	4.48	7.72	187	115	4.6	7.93	192
Potatoes, boiled	.35		223	.78		223	236	.82		236	325	1.13		325	21	.07		21	193	.67		193	283	.99		283
Corn bread	1.0	5.0					69	.69	3.45	184									78	.78	3.90	207	72	.72	3.6	192
Baked beans	1.2	2.4	124	1.48	2.97	167	97	1.16	2.32	131	141	1.69	3.38	190					105	1.26	2.52	142	110	1.32	2.64	149
Gravy	.27	4.0	70	.18	2.8	31	68	.18	2.72	30	73	.19	2.92	32	63	.17	2.52	28	64	.17	2.56	28	65	.17	2.6	29
Corn flakes	1.0		19	.19		70	74	.74		271	31	.31		114	25	.25		92	19	.19		70	62	.62		228
Gelatin	.27		74	.19		10	100	.27		13	113	.3		15	137	.37		18	146	.39		19	122	.32		16
Date pudding	.34	3.0	70	.23	2.1	150	84	.28	2.52	180	88	.29	2.64	188	97	.32	2.71	208	104	.35	3.12	223				
Tomatoes	.13		105	.13		24	94	.12		22	141	.18		32	119	.15		27	154	.2		35	128	.16		29
Muskmelon	.08		146	.11		60	163	.13		67	179	.14		73	206	.16		84	207	.16		85	135	.1		55
Apple sauce	.13		48	.06		78	58	.07		95					65	.08		106	81	.1		132	70	.09		114
Coffee			200				200												150				200			
Ice tea							400				400								250				200			
Total			2,175	17.66	116.86	3,008	1,890	15.82	108.13	3,346	2,018	17.15	141.19	3,428	2,313	17.32	145.77	3,173	1,965	15.78	108 00	3,109	1,935	17.33	128.94	3,364

DATE: SEPTEMBER 11.

Bread	1.5	1.5	182	2.73	2.73		154	2.31	2.31		182	2.73	2.73		77	1.15	1.15		171	2.56	2.56		204	3.06	3.06	
Butter		84.0	60		50.4		55		46.2		105		88.2		55		46.2		81		68.04		79		66.36	
Sugar			84				206				93				107				145				149			
Milk	.5	3.5	650	3.25	22.75		200	1.0	7.0		200	1.0	7.0		400	2.0	14.0		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	60	.24	11.1		60	.24	11.1		60	.24	11.1		60	.24	11.1		60	.24	11.1		60	.24	11.1	
Meat, hash	2.3	4.7	101	2.32	4.74		110	2.53	5.17		119	2.73	5.59		83	1.9	3.9		112	2.57	5.26		102	2.34	4.79	
Meat, potted beef	5.3	12.7	20	1.06	2.54		71	3.76	8.81		63	3.33	8.0						62	3.28	7.87		71	3.76	9.01	
Potatoes, baked	.42		108	.45			104	.43			161	.67							48	.2			120	.5		
Potatoes, baked sweet	.27		95	.25			149	.40			124	.33			38	.1			124	.33			116	.31		
Baked tomatoes	.36		66	.26			109	.39			133	.48							106	.38			92	.33		
Gravy	.24	4.0	107	.25	4.28		131	.31	5.24		139	.33	5.56						135	.32	5.4		129	.3	5.16	
Soup	.51		186	.94			198	1.0			197	1.0			235	1.19			226	1.15			210	1.07		
Corn flakes	1.0		17	.17			49	.49			22	.22			27	.27			19	.19			51	.51		
Creamed rice pudding	.53	3.6	159	.84	5.72		163	.86	5.86		177	.93	6.37		71	.37	2.55		180	.95	6.48		147	.77	5.29	
Spinach	.47		56	.26			60	.28			88	.41							115	.54			93	.43		
Baked apple pudding	.34	4.0	140	.47	5.60		154	.52	6.16		173	.58	6.92		125	.42	5.0		174	.59	6.96		160	.54	6.40	
Peaches	.13		111	.14			169	.21			160	.2			171	.22			155	.2			142	.18		
Eggs	1.8	10.0					112	2.01	11.2		92	1.65	9.2						105	1.8	10.5		88	1.58	8.8	
Coffee																										
Ice tea							600				400								400				400			
Total			2,202	13.63	109.86		2,254	16.74	109.05		2,288	16.87	150.67		1,449	7.86	83.90		2,218	16.30	131.17		2,213	16.92	126.97	

Daily food chart—Continued.

DATE: SEPTEMBER 12.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	110	1.65	1.65		136	2.04	2.04		167	2.5	2.5		112	1.68	1.68		99	1.48	1.48		204	3.06	3.06	
Butter		84.0	53		44.52		49		41.16		115		96.6		65		54.6		82		68.88		87		73.08	
Sugar			24				132				53				115				105				107			
Milk	.5	3.5	900	4.5	31.5		200	1.0	7.0		200	1.0	7.0		850	4.25	29.75		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast beef	4.4	16.9	65	2.86	10.98		58	2.55	9.8		60	2.64	10.14		62	2.72	10.47		66	2.9	11.15		67	2.94	11.32	
Eggs	2.2	10.0					57	1.25	5.7		50	1.1	5.0						77	1.69	7.7		53	1.16	5.3	
Potatoes, boiled	.33		97	.32			88	.29			120	.39							117	.38			100	.33		
String beans	.23		57	.13			73	.16			67	.15			67	.15			95	.21			54	.12		
Baked beans	1.3	3.8	249	3.23	9.46		203	2.63	7.71		420	5.46	15.96		150	1.95	5.7		324	4.21	12.31		401	5.21	15.23	
Gravy	.24	4.0	73	.17	2.92		71	.17	2.84		70	.16	2.8		73	.17	2.92		68	.16	2.72		69	.16	2.76	
Shredded wheat	1.7		30	.51			41	.69							33	.56							67	1.13		
Vanilla cream pudding	.58	4.0	80	.46	3.2						130	.75	5.20		138	.8	5.52		135	.78	5.40		115	.66	4.60	
Tomatoes	.14		120	.16			118	.16			90	.12			96	.13			115	.16			119	.16		
Baked apples	.1		59	.06			237	.24			233	.23			80	.08			275	.28			240	.24		
Muskmelon	.08		96	.07			87	.07			89	.07			136	.1			144	.11			89	.07		
Cocoa							200												200				200			
Ice tea							400				400								400				400			
Total			2,123	14.56	124.58		1,660	11.69	96.60		1,974	15.01	165.55		2,087	13.03	130.99		2,012	13.80	136.99		2,082	16.68	142.70	

DATE: SEPTEMBER 13.

Bread	1.5	1.5	210	3.15	3.15		153	2.29	2.29		210	3.15	3.15		123	1.84	1.84		147	2.2	2.2		200	3.0	3.0	
Butter		84.0	57		47.88		60		50.4		112		94.08		106		89.04		74		62.16		98		82.32	
Sugar			87				230				106				220				136				143			
Milk	.5	3.5	150	.75	5.25		200	1.0	7.0		200	1.0	7.0		650	3.25	22.75		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	170	.68	31.45		170	.68	31.45		140	.56	25.9		170	.68	31.45		170	.68	31.45		170	.68	31.45	
Meat, roast beef	5.0	10.0	141	7.05	14.1		138	6.9	13.8		131	6.55	13.1		65	3.25	6.5						148	7.4	14.8	
American cheese	3.0	35.0	69	2.07	24.15		39	1.17	13.65		32	.96	11.2						38	1.14	13.3		27	.81	9.45	
Potatoes, boiled	.33		88	.29			78	.25			107	.35											80	.26		
Potatoes, sweet, baked	.27		130	.35			61	.16			146	.39			31	.08			82	.22			118	.31		
Baked beans	1.5	2.4	100	1.5	2.4		121	1.81	2.9		142	2.13	3.4						84	1.26	2.01		128	1.92	3.07	
Rice	.28		91	.25			81	.22			90	.25			81	.22			86	.24			85	.23		
Gravy	.38	4.0	127	.48	5.08		101	.38	4.04		135	.51	5.4		68	.25	2.72		69	.26	2.76		129	.49	5.16	
Corn flakes	1.0		21	.21			62	.62			26	.26			23	.23			18	.18			49	.49		
Gelatin	.27		140	.37			165	.44			193	.52			101	.27			72	.19			146	.39		
Celery soup	.4		200	.8			200	.8			198	.79			202	.81			223	.89			225	.9		
Lima beans	1.0		13	.13							77	.77							57	.57						
Peaches	.13		165	.21			172	.22			200	.26			203	.26			216	.28			221	.28		
Ice tea							200				200												200			
Coffee			200				200												200				200			
Cocoa			200				200				200				200				200				200			
Total			1,959	18.29	133.46		2,031	16.94	125.53		2,245	18.45	163.23		2,043	11.14	154.30		1,672	9.11	120.88		2,167	18.16	156.25	

DATE: SEPTEMBER 14.

Bread	1.5	1.5	186	2.79	2.79	521	151	2.26	2.26	423	228	3.42	3.42	638	142	2.13	2.13	398	187	2.8	2.8	524	185	2.77	2.77	518
Butter		84.0	65		54.6	508	65		54.6	508	132		110.88	1,031	77		64.68	601	79		66.36	617	74		62.16	578
Sugar			55			226	170			697	94			385	125			513	72			295	55			226
Milk	.5	3.5	650	3.25	22.75	436	200	1.0	7.0	134	200	1.0	7.0	134	900	4.5	31.5	603	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	110	.44	20.35	221	100	.4	18.5	201	100	.4	18.5	201	100	.4	18.5	201	100	.4	18.5	201	100	.4	18.5	201
Meat, hash	3.3	5.6	99	3.26	5.54	155	103	3.39	5.76	162	101	3.33	5.65	159	98	3.23	5.48	154	100	3.3	5.6	157	112	3.69	6.26	176
Meat, veal	5.3	3.7	54	2.86	1.99	92	63	3.33	2.33	107	95	5.03	3.51	162	66	3.49	2.44	112	63	3.33	2.33	107	69	3.65	2.55	117
Potatoes, baked	.41		294	1.2		294	289	1.18		289	413	1.69		413					189	.77		189	273	1.11		273
Eggs	1.5	10.0					82	1.23	8.2	107	190	2.85	19.0	249	92	1.38	9.2	121	81	1.21	8.1	106	115	1.72	11.5	151
Escalloped tomatoes	.38		101	.38		58	283	1.07		161	289	1.09		165	88	.33		50	388	1.47		221	262	.99		149
Gravy	.24	4.0	63	.15	2.52	27	50	.12	2.0	22	129	.3	5.16	55	59	.14	2.36	25	68	.16	2.72	29	63	.15	2.52	27
Shredded wheat	1.7		32	.54		115	34	.57		122	33	.56		118	35	.59		126					64	1.08		230
Rice custard	.54	4.0	134	.72	5.36	239	124	.66	4.96	221	162	.87	6.48	288	83	.44	3.32	158	149	.8	5.96	265	175	.94	7.0	312
Plain custard	.75	4.5	88	.66	3.96	173	109	.81	4.9	201					121	.9	5.44	223	141	1.05	6.34	259	147	1.1	6.61	270
Peaches	.13		94	.12		88	122	.15		115	113	.14		106	121	.15		114	127	.16		119	106	.13		100
Coffee			200				200												150				200			
Ice tea							400				400								200				200			
Total			2,025	16.37	119.86	3,153	1,945	16.17	110.51	3,470	2,079	20.68	179.60	4,104	2,107	17.68	145.05	3,399	1,644	16.45	125.71	3,223	2,000	18.73	126.87	3,462

Daily food chart—Continued.

DATE: SEPTEMBER 15.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject III (A. G.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject V (A. M. N.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	227	3.4	3.4	......	250	3.75	3.75	......	189	2.83	2.83	......	112	1.68	1.68	......	140	2.1	2.1	......	222	3.33	3.33	......
Butter	......	84.0	53	......	44.52	......	79	......	66.36	......	96	......	80.64	......	73	......	61.32	......	58	......	48.72	......	106	......	89.04	......
Sugar	......	......	121	......	......	......	174	......	......	......	87	......	......	......	166	......	......	......	100	......	......	......	133	......	......	......
Milk	.5	3.5	400	2.0	14.0	......	200	1.0	7.0	......	200	1.0	7.0	......	900	4.5	31.5	......	450	2.25	15.75	......	200	1.0	7.0	......
Cream	.4	18.5	160	.64	29.6	......	160	.64	29.6	......	160	.64	29.6	......	160	.64	29.6	......	160	.64	29.6	......	160	.64	29.6	......
Meat, roast pork	4.5	22.2	56	2.52	11.87	......	59	2.65	12.5	......	61	2.74	12.93	......	64	2.88	13.56	......	69	3.1	14.62	......	71	3.19	15.05	......
Meat, roast beef	4.9	5.3	59	2.89	3.12	......	61	2.98	3.23	......	60	2.95	3.18	......	67	3.28	3.55	......	63	3.08	3.33	......	63	3.08	3.33	......
Eggs	1.4	10.0	......	......	......	......	102	1.42	10.2	......	119	1.66	11.9	......	......	......	......	......	103	1.44	10.3	......	96	1.34	9.6	......
Potatoes, boiled sweet	.21	......	231	.48	......	......	201	.42	......	......	242	.5	......	......	......	......	......	......	224	.47	......	......	242	.5	......	......
String beans	.2	......	39	.07	......	......	53	.1	......	......	72	.14	......	......	......	......	......	......	58	.11	......	......	15	......	......	......
Slaw (cabbage)	.25	......	54	.13	......	......	48	.12	......	......	60	.15	......	......	......	......	......	......	64	.16	......	......	42	.1	......	......
Gravy	.29	4.0	126	.36	5.04	......	133	.38	5.32	......	123	.35	4.92	......	136	.39	5.44	......	139	.4	5.56	......	131	.37	5.24	......
Corn flakes	1.0	......	29	.29	......	......	59	.59	......	......	32	.32	......	......	25	.25	......	......	23	.23	......	......	42	.42	......	......
Chocolate pudding	.59	1.4	84	.49	1.17	......	132	.77	1.84	......	171	1.0	2.39	......	145	.85	2.03	......	131	.77	1.83	......	156	.92	2.18	......
Baked apple pudding	.7	4.0	122	.85	4.88	......	157	1.09	6.28	......	182	1.27	7.28	......	118	.82	4.72	......	152	1.06	6.08	......	158	1.1	6.32	......
Bananas	.12	......	130	.15	......	......	153	.18	......	......	151	.18	......	......	161	.19	......	......	155	.18	......	......	132	.15	......	......
Coffee	......	......	200	......	......	......	400	......	......	......	......	......	......	......	......	......	......	......	150	......	......	......	400	......	......	......
Ice tea	......	......	......	......	......	......	200	......	......	......	400	......	......	......	......	......	......	......	200	......	......	......	......	......	......	......
Total	......	......	1,891	14.27	117.60	......	2,021	16.09	146.08	......	2,005	15.72	162.67	......	2,127	15.48	153.40	......	2,089	15.99	137.89	......	1,969	16.14	170.69	......

DATE: SEPTEMBER 16.

Bread	1.5	1.5	204	3.06	3.06		234	3.51	3.51		215	3.22	3.22		100	1.5	1.5		127	1.9	1.9		201	3.15	3.15	
Butter		84.0	75		63.0		91		76.44		105		88.2		55		46.2		80		67.2		86		72.24	
Sugar			75				151				80				180				136				100			
Milk	.5	3.5	700	3.5	24.5		200	1.0	7.0		200	1.0	.70		950	4.75	33.25		200	1.0	7.0		200	1.0	7.0	
Cream	4.0	18.5	90	.36	16.65		100	.4	18.5		100	.4	18.5		100	.4	18.5		100	.4	18.5		100	.4	18.5	
Meat, roast veal	5.5	11.7	57	3.13	6.66		56	3.08	6.55		57	3.13	6.66		56	3.08	6.55		54	2.97	6.31		57	3.13	6.60	
Eggs	1.5	10.0					97	1.45	9.7		123	1.84	12.3						120	1.8	12.0		121	1.81	12.1	
Potatoes, boiled	.33		274	.9			146	.48			278	.91			116	.38			227	.74			158	.52		
Corn flakes	1.0		13	.13			59	.59			18	.18			23	.23			25	.25			72	.72		
Baked beans	1.5	2.4	79	1.18	1.89		160	2.4	3.84		222	3.33	5.32		28	.42	.68		143	2.14	3.43		155	2.32	3.72	
Rice	.23		81	.18			78	.17			86	.19			75	.17			89	.2			81	.18		
Gravy	.24	4.0	73	.17	2.92		61	.14	2.44		65	.15	2.6		54	.12	2.16		71	.17	2.84					
Banana pudding	.57	1.2	71	.4	.85		157	.89	1.88		145	.82	1.74		144	.82	1.74		165	.94	1.98		166	.94	1.99	
Tomatoes	.13		87	.11			228	.29			132	.17			109	.14			109	.14			91	.11		
Cantaloupe	.08		155	.12			115	.09			88	.07			126	.1			105	.08			107	.08		
Peaches	.13		50	.07			51	.07			49	.07			44	.06			54	.07			38			
Coffee			200				200												150				200			
Ice tea							400				400								400							
Total			2,084	13.31	119.53		1,994	14.56	129.86		1,963	15.48	145.54		2,160	12.17	110.58		1,805	12.80	121.16		1,733	14.36	125.36	

DATE: SEPTEMBER 17.

Bread	1.5	1.5	261	3.91	3.91	731	164	2.46	2.46	459	182	2.73	2.73	510	112	1.68	1.68	314	170	2.55	2.55	476	219	3.28	3.28	613
Butter		84.0	63		52.92	492	60		50.4	469	96		80.64	750	81		68.04	633	50		42.0	391	71		59.64	555
Sugar			68			279	249			1,021	81			332	102			418	79			324	107			439
Milk	.5	3.5	400	2.0	14.0	268	250	1.25	8.75	168	200	1.0	7.0	134	950	4.75	33.25	637	450	2.25	15.75	302	200	1.0	7.0	134
Cream	.4	18.5	160	.64	29.6	322	180	.72	33.3	362	160	.64	29.6	322	110	.44	20.35	221	160	.64	29.6	322	160	.64	29.6	322
Meat, roast beef	5.3	12.6	122	6.46	15.37	309	133	7.04	16.75	336	152	8.05	19.15	385	75	3.97	9.45	190	135	7.15	17.01	342	130	6.89	16.38	329
Eggs	1.5	10.0					94	1.41	9.4	123	91	1.36	9.1	119					89	1.33	8.9	117	68	1.02	6.8	89
Potatoes, baked	.42		258	1.08		258	247	1.03		247	258	1.08		258	90	.37		90	253	1.06		253	280	1.17		280
Stewed carrots	.13		44	.06		20	47	.06		21	49	.07		22	14			6					58	.07		26
Gravy	.23	4.0	118	.27	4.72	51	117	.26	4.68	50	166	.38	6.64	71	118	.27	4.72	51	123	.28	4.92	53	122	.28	4.88	52
Corn flakes	1.0		24	.24		88	86	.86		315	29	.29		106	34	.34		125	39	.39		143	69	.69		253
Corn starch pudding	.44	3.0	55	.24	1.65	63	136	.59	4.08	155	195	.85	5.85	222	84	.36	2.52	96	144	.63	4.32	164	137	.6	4.11	156
Prunes	.12		106	.13		87	94	.11		77	108	.13		89	115	.14		94	129	.15		116	120	.14		98
Peaches	.13		83	.1		78	115	.14		108	122	.15		115					120	.15		113	104	.13		98
Tomatoes	.13		53	.06		12	85	.11		20	107	.13		25					102	.13		23	85	.11		20
Coffee			400				550												150				400			
Ice tea							200				400								200				200			
Total			1,814	15.19	122.17	3,058	2,057	16.04	129.82	3,932	1,996	16.86	160.71	3,460	1,885	12.32	140.01	2,875	2,043	16.71	125.05	3,139	1,930	16.02	131.69	3,464

Daily food chart—Continued.

DATE: SEPTEMBER 18.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	209	3.13	3.13		222	3.33	3.33		180	2.7	2.7		106	1.59	1.59		158	2.37	2.37		213	3.19	3.19	
Butter		84.0	69		57.96		79		66.36		102		85.68		63		52.92		38		31.92		118		99.12	
Sugar			66				116				97				109				74				115			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		450	2.25	15.75		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast lamb	4.3	21.7	67	2.88	14.53		66	2.83	14.32		70	3.01	15.19		61	2.62	13.23		58	2.49	12.58		76	3.26	16.49	
Meat, roast pork	4.4	12.1	68	2.99	8.22		69	3.03	8.34		69	3.03	8.34		70	3.08	8.47		82	3.6	9.92		78	3.43	9.43	
Potatoes, boiled	.33		115	.37			155	.51			115	.37							111	.37			131	.43		
Potatoes, baked, sweet	.27		105	.28			117	.31			127	.34			41	.11			103	.27			81	.21		
Corn flakes	1.0		24	.24			50	.50			33	.33			30	.3			29	.29			50	.5		
Gravy	.25	4.0	125	.31	5.0		131	.32	5.24		135	.33	5.4		131	.32	5.24		139	.34	5.56		136	.34	5.44	
Vanilla cream pudding	.69	4.0	89	.61	3.56		137	.94	5.48		138	.95	5.52		128	.88	5.12		159	1.09	6.36		168	1.15	6.72	
Tomatoes	.13		126	.16			277	.36			171	.22			144	.18			178	.23			103	.13		
Apple sauce	.13		72	.09			240	.31			242	.31			232	.3			244	.31			210	.27		
Stewed pears	.07						81	.06			117	.08			42				126	.09			106	.07		
Eggs	1.6	10.0					73	1.16	7.3		97	1.55	9.7						81	1.29	8.1		81	1.29	8.1	
Coffee			400				400												150				400			
Ice tea							200				400								200				200			
Total			1,645	13.50	126.75		2,123	15.10	137.72		2,003	14.66	159.88		2,167	14.32	138.42		2,140	15.43	112.91		1,976	15.71	175.84	

DATE: SEPTEMBER 19.

Bread	1.4	1.5	244	3.41	3.66	....	144	2.01	2.16	....	138	1.93	2.07	....	105	1.47	1.57	....	112	1.56	1.68	....	233	3.26	3.49	....
Butter	....	84.0	81	....	68.04	....	44	....	36.96	....	83	....	69.72	....	53	....	44.52	....	53	....	44.52	....	86	....	72.24	....
Sugar	....	....	99	....	....	....	180	....	....	....	117	....	....	....	162	....	....	....	142	....	....	....	141	....	....	....
Milk	.49	3.5	650	3.18	22.75	....	200	.98	7.0	....	200	.98	7.0	....	900	4.41	31.5	....	200	.98	7.0	....	200	.98	7.0	....
Cream	.4	18.5	150	.6	27.75	....	150	.6	27.75	....	150	.6	27.75	....	150	.6	27.75	....	150	.6	27.75	....	150	.6	27.75	....
Meat, veal-sausage	2.8	35.4	126	3.52	44.6	....	93	2.6	32.92	....	103	2.88	36.46	....	51	1.42	18.05	....	94	2.63	33.27	....	104	2.91	36.81	....
Eggs	1.7	10.0	....	....	....	....	91	1.54	9.1	....	118	2.0	11.8	....	....	....	....	....	50	.85	5.0	....	112	1.9	11.2	....
Potatoes, boiled	.38	....	252	.95	....	....	111	.42	....	....	120	.45	....	....	....	....	....	....	140	.53	....	....	222	.84	....	....
Turnips	.14	....	21	....	....	....	72	.1	....	....	....	....	....	....	....	....	....	....	15	....	....	....	84	.11	....	....
Baked beans	1.3	2.4	203	2.63	4.87	....	....	....	....	....	283	3.67	6.79	....	62	.8	1.48	....	221	2.87	5.3	....	195	2.53	4.68	....
Gravy	.21	5.2	64	.13	3.32	....	62	.13	3.22	....	74	.15	3.84	....	....	....	....	....	76	.15	3.95	....	73	.15	3.79	....
Corn flakes	1.0	....	27	.27	....	....	43	.43	....	....	27	.27	....	....	34	.34	....	....	43	.43	....	....	61	.61	....	....
Tomato soup	.11	....	242	.26	....	....	223	.24	....	....	241	.26	....	....	236	.25	....	....	230	.25	....	....	235	.25	....	....
Toast	1.5	1.6	15	.22	.24	....	14	.21	.22	....	19	.28	.3	....	15	.22	.24	....	14	.21	.22	....	17	.25	.27	....
Chocolate pudding	.68	1.4	11	.07	.15	....	140	.95	1.96	....	120	.81	1.68	....	142	.96	1.99	....	158	1.07	2.21	....	158	1.07	2.21	....
Cantaloupe	.08	....	98	.08	....	....	143	.11	....	....	106	.08	....	....	146	.11	....	....	173	.13	....	....	109	.08	....	....
Peaches	.13	....	135	.17	....	....	159	.2	....	....	175	.22	....	....	146	.18	....	....	166	.21	....	....	161	.2	....	....
Coffee	....	....	200	....	....	....	200	....	....	....	....	....	....	....	....	....	....	....	150	....	....	....	200	....	....	....
Ice tea	....	....	....	....	....	....	400	....	....	....	200	....	....	....	....	....	....	....	600	....	....	....	400	....	....	....
Total	....	....	2,418	15.49	175.38	....	1,879	10.52	121.29	....	2,074	14.58	167.41	....	2,202	10.76	127.10	....	2,037	12.47	130.90	....	2,341	15.73	169.44	....

DATE: SEPTEMBER 20.

Bread	1.5	1.5	217	3.25	3.25	....	173	2.59	2.59	....	238	3.57	3.57	....	59	0.88	0.88	....	117	1.75	1.75	....	214	3.21	3.21	....
Butter	....	84.0	76	....	63.84	....	30	....	25.2	....	125	....	105.0	....	49	....	41.16	....	58	....	48.72	....	107	....	89.88	....
Sugar	....	....	90	....	....	....	164	....	....	....	121	....	....	....	116	....	....	....	128	....	....	....	130	....	....	....
Milk	.5	3.5	400	2.0	14.0	....	390	1.95	13.65	....	200	1.0	7.0	....	900	4.5	31.5	....	200	1.0	7.0	....	200	1.0	7.0	....
Cream	.4	18.5	120	.48	22.2	....	87	.34	16.09	....	120	.48	22.2	....	120	.48	22.2	....	120	.48	22.2	....	120	.48	22.2	....
Meat, steak	4.5	8.0	134	6.03	10.72	....	135	6.07	10.8	....	193	8.68	15.44	....	126	5.67	10.08	....	139	6.25	11.12	....	148	6.66	11.84	....
Potatoes, boiled	.33	....	93	.3	....	....	65	.21	....	....	111	.36	....	....	....	....	....	....	82	.27	....	....	88	.29	....	....
Potatoes, baked sweet	.27	....	101	.27	....	....	66	.17	....	....	159	.42	....	....	64	.17	....	....	88	.23	....	....	152	.41	....	....
Baked beans	1.4	2.4	129	1.8	3.09	....	128	1.79	3.07	....	233	3.26	5.59	....	37	.51	.88	....	104	1.45	2.49	....	123	1.72	2.95	....
Corn flakes	1.0	....	24	.24	....	....	74	.74	....	....	59	.59	....	....	32	.32	....	....	43	.43	....	....	52	.52	....	....
Gravy	.57	4.0	111	.63	4.4	....	121	.69	4.84	....	143	.81	5.72	....	114	.64	4.56	....	122	.69	4.88	....	121	.68	4.84	....
Squash pudding	.54	2.0	29	.15	.58	....	150	.81	3.0	....	208	1.12	4.16	....	175	.94	3.50	....	211	1.13	4.22	....	218	1.17	4.36	....
Corn soup	.33	....	236	.77	....	....	237	.78	....	....	239	.78	....	....	252	.83	....	....	276	.91	....	....	236	.77	....	....
Peaches	.13	....	203	.26	....	....	209	.27	....	....	238	.3	....	....	123	.15	....	....	246	.31	....	....	241	.31	....	....
Cantaloupe	.08	....	131	.10	....	....	105	.08	....	....	51	....	....	....	85	.06	....	....	128	.1	....	....	92	.07	....	....
Coffee	....	....	400	....	....	....	400	....	....	....	....	....	....	....	....	....	....	....	156	....	....	....	400	....	....	....
Ice tea	....	....	....	....	....	....	400	....	....	....	400	....	....	....	....	....	....	....	600	....	....	....	200	....	....	....
Total	....	....	2,094	16.28	122.08	....	2,134	16.49	79.24	....	2,438	21.37	168.68	....	2,252	15.15	114.76	....	2,062	15.00	102.38	....	2,242	17.29	146.28	....

Daily food chart—Continued.

DATE: SEPTEMBER 21.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.). Amount of food.	Subject I Nitrogen.	Subject I Ether extract.	Subject I Estimated fuel value.	Subject II (W. W. C.). Amount of food.	Subject II Nitrogen.	Subject II Ether extract.	Subject II Estimated fuel value.	Subject III (A. G.). Amount of food.	Subject III Nitrogen.	Subject III Ether extract.	Subject III Estimated fuel value.	Subject IV (O. F. L.). Amount of food.	Subject IV Nitrogen.	Subject IV Ether extract.	Subject IV Estimated fuel value.	Subject V (A. M. N.). Amount of food.	Subject V Nitrogen.	Subject V Ether extract.	Subject V Estimated fuel value.	Subject VI (C. H. S.). Amount of food.	Subject VI Nitrogen.	Subject VI Ether extract.	Subject VI Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	184	2.76	2.76	515	134	2.01	2.01	375	156	2.34	2.34	436	82	1.23	1.23	230	140	2.1	2.1	392	213	3.19	3.19	596
Butter		84.0	92		77.28	718	39		32.76	304	102		85.68	796	28		23.52	218	64		53.76	500	84		70.56	656
Sugar			59			242	142			582	58			238	120			492	101			414	102			418
Milk	.5	3.5	650	3.25	22.75	436	200	1.0	7.0	134					900	4.5	31.5	603	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	150	.6	27.75	301	120	.48	22.2	241	150	.6	27.75	301	172	.68	31.82	346	150	.6	27.75	301	150	.6	27.75	301
Meat, roast beef	5.1	10.2	61	3.11	6.28	137	76	3.87	7.82	171	75	3.82	7.72	169	74	3.77	7.62	167	76	3.87	7.82	171	74	3.77	7.62	167
Meat, hash	3.0	5.9	111	3.33	6.54	169	122	3.66	7.19	185	134	4.03	7.9	204	123	3.69	7.25	187					111	3.33	6.54	169
Potatoes, baked	.41		214	.87		214	268	1.09		268	344	1.41		344					200	.82		200	222	.91		222
Escalloped tomatoes	.31		58	.17		33	108	.33		62	157	.48		89					149	.46		85	169	.52		96
Baked beans	1.4	2.4	192	2.68	4.6	259	114	1.59	2.73	154	127	1.77	3.04	171					96	1.34	2.3	129	111	1.55	2.66	150
Gravy	.28	4.0	124	.34	4.96	54	122	.34	4.88	53	132	.36	5.28	54	127	.35	5.08	54	127	.35	5.08	54	131	.36	5.24	54
Corn flakes	1.0		18	.18		66	71	.71		261					33	.33		121	37	.37		135	60	.6		220
Rice pudding	.53	3.6	118	.62	4.24	152	156	.82	5.61	201	146	.77	5.25	187					169	.89	6.08	217	154	.81	5.54	198
Tapioca pudding	.01	1.0	81		.81	94	204		2.04	236	226		2.26	262	196		1.96	226	267		2.67	309	260		2.60	301
Fried apples	.05		50			33	100	.05		67	97	.05		65	64			43	151	.07		101	97	.05		65
Eggs	1.7	10.0					89	1.51	8.9	122	160	2.72	16.0	219									139	2.36	13.9	190
Coffee			200				200												150				200			
Ice tea							400				400								400				200			
Total			2,162	17.91	157.97	3,423	2,065	17.46	103.14	3,416	2,064	18.35	163.22	3,535	1,919	14.55	109.98	2,687	1,927	11.87	114.56	3,142	2,277	19.05	152.60	3,937

DATE: SEPTEMBER 22.

Bread	1.5	1.5	236	3.54	3.54		168	2.52	2.52		212	3.13	3.13		66	0.99	0.99		52	0.78	0.78		199	2.98	2.98	
Butter		84.0	68		57.12		54		45.36		133		111.72		32		26.88		22		18.48		114		95.76	
Sugar			80				192				82				162				154				79			
Milk	.5	3.5	400	2.0	14.0		90	.45	3.15		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75		160	.64	29.6		150	.6	27.75	
Meat, roast beef (1)	5.4	10.0	62	3.34	6.2		76	4.1	7.6		69	3.72	6.9		77	4.15	7.7		72	3.88	7.2		82	4.42	8.2	
Meat, roast beef (2)	5.9	10.0	62	3.65	6.2		66	3.89	6.6		70	4.13	7.0		45	2.65	4.5		77	4.54	7.7		78	4.6	7.8	
Potatoes, boiled	.33		138	.45			133	.43			135	.44							124	.4			122	.4		
Potatoes, baked sweet	.27		118	.31			132	.35			153	.41			33	.08			155	.41			162	.43		
Slaw (cabbage)	.24		37	.08			20	.05			43	.1							42	.1			55	.13		
Gravy	.24	4.0	127	.3	5.08		126	.3	5.04		129	.31	5.16		119	.28	4.76		198	.47	7.92		125	.3	5.0	
Eggs	2.2	10.0					77	1.69	7.7		85	1.87	8.5						42	.92	4.2		94	2.06	9.4	
Cream of wheat	.36		159	.57			170	.61			194	.69			191	.68			207	.74			191	.68		
Tapioca pudding	.01		80				172				192				197				232				205			
Custard	.94	4.5	32	.3	1.44		123	1.15	5.53		128	1.2	5.76		83	.78	3.73		127	1.19	5.71		127	1.19	5.71	
Bananas	.12		107	.12			112	.13							152	.18			138	.16			131	.15		
Tomatoes	.13		142	.18			179	.23			164	.21			75	.09			112	.14			129	.16		
Coffee			400				400												150				400			
Ice tea							200				400								400							
Total			1,998	15.44	121.33		2,040	16.50	111.25		2,139	17.81	182.92		2,282	14.98	107.81		2,114	15.37	88.59		2,243	19.10	169.60	

DATE: SEPTEMBER 23.

Bread	1.5	1.5	219	3.28	3.28		185	2.77	2.77		220	3.3	3.3		58	0.87	0.87		59	0.88	0.88		207	3.1	3.1	
Butter		84.0	82		68.88		62		52.08		139		116.76		29		24.36		11		9.24		62		52.08	
Sugar			116				170				132				106				182				171			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2	
Meat, roast lamb	5.1	11.3	65	3.31	7.34		70	3.57	7.91		76	3.87	8.58		55	2.8	6.21		79	4.02	8.92		81	4.13	9.15	
Meat, steak	4.5	8.5	73	3.28	6.2		77	3.46	6.54		79	3.55	6.71		88	3.96	7.48		85	3.82	7.22		84	3.78	7.14	
Potatoes, baked	.43		254	1.09			242	1.04			295	1.26							202	.86			261	1.12		
Eggs	1.6	10.0					99	1.58	9.9		129	2.06	12.9										106	1.69	10.6	
Tomatoes	.13		120	.15			130	.16			103	.13			109	.14			136	.17						
Gravy	.21	4.0	125	.26	5.0		133	.27	5.32		128	.26	5.12		110	.23	4.4		132	.27	5.28		137	.28	5.48	
Corn flakes	1.0		29	.29			55	.55			26	.26			37	.37			33	.33			56	.56		
Toast	1.6	1.6	21	.34	.34		22	.35	.35		24	.38	.38		18	.29	.29		25	.4	.4		27	.43	.43	
Rice	.25		53	.13			39	.09			57	.14							67	.17			54	.13		
Prunes	.12		98	.12			113	.13			129	.15							147	.17			136	.16		
Cauliflower soup	.31	1.3	242	.75	3.14		223	.69	2.89		223	.69	2.89		235	.72	3.05		254	.78	3.3		288	.89	3.74	
Peaches	.13		143	.18			187	.24			191	.24			208	.27			227	.29			179	.23		
Cantaloupe	.08		90	.07			138	.11			153	.12			165	.13			199	.16			189	.15		
Coffee			450				450												150				500			
Ice tea							200				400								400							
Total			2,250	15.73	130.38		2,065	16.49	116.96		2,424	17.89	185.84		2,238	14.76	100.36		2,158	13.80	64.44		2,358	18.13	120.92	

Daily food chart—Continued.

DATE: SEPTEMBER 24.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	268	4.02	4.02		265	3.97	3.97		213	3.19	3.19		118	1.77	1.77		153	2.29	2.29		246	3.69	3.69	
Butter		84.0	83		69.72		83		69.72		108		90.72		72		60.48		57		47.88		76		63.84	
Sugar			71				200				74				112				174				158			
Milk	.5	3.5	400	2.0	14.0		134	.67	4.69		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	135	.54	24.97		160	.64	29.6		160	.64	29.6		160	.64	29.6		160	.64	29.6		110	.44	20.35	
Meat, hash	3.1	4.9	113	3.5	5.53		117	3.62	5.73		121	3.75	5.92		121	3.75	5.92		90	2.79	4.41		134	4.15	6.56	
Meat, pork loin	4.3	18.8	79	3.39	14.85		78	3.35	14.66		84	3.61	15.79		83	3.56	15.6		86	3.69	16.16		89	3.83	16.73	
Potatoes, baked	.42		283	1.18			256	1.07			357	1.49			41	.17			188	.78			296	1.24		
Eggs	1.8	10.0					68	1.22	6.8		69	1.24	6.9						89	1.6	8.9		87	1.56	8.7	
Gravy	.32	11.0	123	.39	13.53		129	.41	14.19		132	.42	14.52		120	.38	13.2		133	.42	14.63		129	.41	14.19	
Cream of wheat	.3		177	.53			272	.81							417	1.25			217	.65			230	.69		
Baked apples	.1		187	.2			200	.2			217	.22			124	.12			278	.28			223	.22		
Corn soup	.27		235	.63			246	.66			247	.66			263	.71			230	.62			243	.65		
Tomatoes	.13		89	.11			87	.11			98	.13							109	.14			110	.14		
Cantaloupe	.08		137	.1			180	.14			206	.16			156	.12			148	.11			201	.16		
Peaches	.13		112	.14			119	.15			163	.21			152	.19			172	.22			142	.18		
Coffee			450				500												150				500			
Ice tea							200				400								400				200			
Total			2,492	16.73	146.62		2,594	17.02	149.36		2,449	16.72	173.64		2,839	17.16	158.07		2,484	15.23	130.87		2,674	18.36	141.06	

DATE: SEPTEMBER 25.

Bread	1.5	1.5	173	2.59	2.59		225	3.37	3.37		237	3.55	3.55		153	2.29	2.29		58	0.87	0.87		237	3.55	3.55	
Butter		84.0	33		27.72		69		57.96		122		102.48		47		39.48		28		23.52		77		64.68	
Sugar			71				134				103				101				101				72			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	86	.34	15.91		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2	
Meat, pot roast	4.9	12.5	57	2.79	7.12		57	2.79	7.12		63	3.08	7.87		44	2.15	5.5		66	3.23	8.25		63	3.08	7.87	
Meat, roast beef	5.6	11.0	61	3.41	6.71		71	3.97	7.81		70	3.92	7.7		66	3.69	7.26		77	4.31	8.47		77	4.31	8.47	
Potatoes, baked	.41		246	1.0			268	1.09			308	1.26			168	.68			220	.9			292	1.19		
Eggs	1.6	10.0					108	1.72	10.8		122	1.95	12.2						85	1.36	8.5		98	1.56	9.8	
Gravy	.31	3.1	137	.42	4.24		135	.42	4.18		135	.42	4.18		123	.38	3.81		136	.42	4.21		133	.41	4.12	
Onions	.1		84	.08			45	.05			120	.12			29				132	.13			83	.08		
Corn flakes	1.0		28	.28			56	.56			34	.34			39	.39			42	.42			60	.6		
Custard	.86	4.5	74	.63	3.33		105	.9	4.72		105	.9	4.72		104	.89	4.68		104	.89	4.68		103	.88	4.63	
Date pudding	.46	2.0	29	.13	.58		179	.82	3.58		174	.8	3.48		158	.72	3.16		188	.86	3.76		184	.84	3.68	
Tomatoes	.13		117	.15			182	.23			114	.14			79	.1			159	.2			118	.15		
Dates	.2		82	.16			70	.14			84	.16			82	.16			100	.2			100	.2		
Coffee			500				500												150				500			
Ice tea							200				400								400				200			
Total			1,678	13.98	82.20		1,977	17.54	128.74		2,111	18.12	175.38		2,213	16.43	119.88		1,816	15.27	91.46		2,017	18.33	136.00	

DATE: SEPTEMBER 26.

Toast	1.6	1.6	25	0.4	0.4		22	0.35	0.35		21	0.34	0.34		19	0.3	0.3		27	0.43	0.43		28	0.45	0.45	
Bread	1.5	1.5	63	.94	.94		42	.63	.63		149	2.23	2.23						55	.82	.82		195	2.92	2.92	
Butter		84.0	39		32.76		27		22.68		113		94.92		7		5.88		78		65.52		88		73.92	
Sugar			87				169				118				121				118				117			
Milk	.5	3.5	580	2.9	20.3		100	.5	3.5		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	160	.64	29.6		160	.64	29.6		160	.64	29.6		160	.64	29.6		160	.64	29.6		160	.64	29.6	
Meat, roast beef	6.4	11.0	64	4.09	7.04		65	4.16	7.15		63	4.03	6.93		67	4.28	7.37		66	4.22	7.26		76	4.86	8.36	
Eggs	1.8	10.0					84	1.51	8.4		116	2.08	11.6													
Potatoes, boiled	.33		143	.47			152	.5			70	.23							106	.34			72	.23		
Potatoes, baked sweet.	.27		51	.13															76	.2			75	.2		
Baked beans	1.3	2.4	198	2.57	4.75		100	1.3	2.4		252	3.27	6.04		52	.67	1.24		96	1.24	2.3		223	2.89	5.35	
Gravy	.12	4.0	68	.08	2.72		67	.08	2.68		72	.08	2.88		70	.08	2.8		67	.08	2.68		65	.07	2.6	
Tomato soup	.1		201	.2			220	.22			210	.21			228	.23			238	.24			256	.26		
Rice	.28		82	.22			94	.26			76	.18			86	.24			70	.19			81	.22		
Baked apples	.1		98	.1			122	.12			88	.09							139	.14			143	.14		
Cream of wheat	.41		36	.14			200	.82			145	.59			236	.96			183	.75			210	.86		
Corn bread	.9	5.0	30	.27	1.5		65	.58	3.25		69	.62	3.45						83	.74	4.15		71	.63	3.55	
Chocolate pudding	1.1	1.4	16	.17	.22		133	1.45	1.86		123	1.35	1.72		124	1.36	1.74		118	1.29	1.65		129	1.41	1.81	
Cantaloupe	.08		126	.1			110	.08			108	.08			116	.09			126	.1			88	.07		
Apple sauce	.13		31				86	.11			88	.11							88	.11			98	.13		
Coffee			250				250												40				250			
Ice tea							400				400								400							
Total			2,098	13.42	100.23		2,098	13.41	82.50		2,241	17.13	166.71		2,186	13.35	80.43		2,09[illegible]	12.53	121.41		2,375	16.98	135.56	

Daily food chart—Continued.

DATE: SEPTEMBER 27.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	120	1.8	1.8		123	1.84	1.84		184	2.76	2.76		88	1.32	1.32		109	1.63	1.63		231	3.46	3.46	
Butter		84.0	37		31.08		89		74.76		108		90.72		76		63.84		45		37.8		44		36.96	
Sugar			61				134				94				104				82				131			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		450	2.25	15.75		200	1.0	7.0	
Cream	.4	18.5	80	.32	14.8		80	.32	14.8		100	.4	18.5		100	.4	18.5		100	.4	18.5		100	.4	18.5	
Meat, roast beef	5.9	6.9	82	4.83	5.65		126	7.43	8.69		124	7.31	8.55		137	8.08	9.45		132	7.78	9.1		132	7.78	9.1	
Potatoes, boiled	.33		270	.89			246	.81			267	.88			124	.4			214	.7			262	.86		
Gravy	.25	4.0	129	.32	5.16		141	.35	5.64		141	.35	5.64		142	.35	5.68		135	.33	5.4		132	.33	5.28	
Corn flakes	1.0		20	.2			46	.46			31	.31			32	.32			31	.31			53	.53		
Vanilla custard	.93	4.5	55	.51	2.47		155	1.44	6.97		152	1.41	6.84		148	1.37	6.66		158	1.46	7.11		151	1.4	6.79	
Gelatin	.48		34	.16			107	.51			124	.59			122	.58			153	.73			141	.67		
Cauliflower	.27		12				47	.12			50	.13							82	.22			44	.11		
Tomato soup	.2		234	.46			208	.42			208	.42			227	.45			218	.43			254	.5		
Tomatoes	.13		105	.13			126	.16			107	.14			31				136	.17			122	.15		
Cantaloupe	.08		204	.16			134	.1			122	.09			140	.11			171	.13			134	.1		
Apples	.04		100				243	.09			205	.08			235	.09			65				192	.07		
Coffee			400				400												150				400			
Ice tea							200				400								200							
Total			1,943	11.78	74.96		2,205	15.05	119.70		2,217	15.87	140.01		2,606	17.97	136.95		2,281	16.54	95.29		2,323	17.36	87.09	

DATE: SEPTEMBER 28.

Toast	1.6	1.6	24	0.38	0.38		26	0.42	0.42		26	0.42	0.42						28	0.45	0.45		25	0.4	0.4	
Bread	1.5	1.5	182	2.73	2.73		83	1.24	1.24		200	3.0	3.0		55	0.82	0.82		92	1.38	1.38		231	3.46	3.46	
Butter		84.0	60		50.4		35		29.4		122		102.48		35		29.4		56		47.04		80		67.2	
Sugar			90				156				92				77				105				128			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0						900	4.5	31.5		450	2.25	15.75		200	1.0	7.0	
Cream	.4	18.5	120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2		120	.48	22.2	
Meat, roast pork	5.1	9.9	68	3.46	6.73		75	3.82	7.42		72	3.67	7.12		68	3.46	6.73		77	3.92	7.62		77	3.92	7.62	
Meat, roast beef	4.3	17.9	74	3.18	13.24		76	3.26	13.6		71	3.05	12.7		32	1.37	5.72		70	3.01	12.53		76	3.26	13.6	
Potatoes, boiled	.33		273	.9			113	.37			321	1.05							204	.67			293	.96		
Potatoes, baked sweet	.27		82	.22			106	.29			108	.29							129	.35			117	.32		
Eggs	1.7	10.0					103	1.75	10.3		117	1.98	11.7										103	1.75	10.3	
Slaw (cabbage)	.24		12								34	.08							59	.14			58	.14		
Rice	.28		75	.21			84	.23			88	.24			73	.2			82	.22			74	.2		
Gravy	.33	4.0	121	.39	4.84		119	.39	4.76		129	.42	5.16		129	.42	5.16		137	.45	5.48		132	.43	5.28	
Corn flakes	1.0		18	.18			47	.47							34	.34			37	.37			48	.48		
Sweet-potato pudding	.47	7.7	21	.09	1.61		137	.64	10.54		155	.72	11.93		34	.15	2.61		144	.67	11.08		150	.7	11.55	
Split-pea soup	.65		244	1.58			247	1.6			281	1.82			69	.44			281	1.82			242	1.57		
Prunes	.12		59	.07			114	.13			174	.2							148	.17			140	.16		
Peaches	.13		50	.06			46	.05			56	.07			52	.06			59	.07			46	.05		
Coffee			400				400												150				400			
Ice tea							200				400								200							
Total			1,973	15.93	116.13		1,887	16.14	106.88		2,166	17.49	176.71		1,678	12.24	104.14		2,278	16.42	123.53		2,340	19.28	148.61	

DATE: SEPTEMBER 29.

Bread	1.5	1.5	255	3.82	3.82		167	2.5	2.5		197	2.95	2.95		161	2.41	2.41		200	3.0	3.0		285	4.27	4.27	
Butter		84.0	83		69.72		74		62.16		122		102.48		80		67.2		101		84.84		93		78.12	
Sugar			64				129				58				157				100				149			
Milk	.5	3.5	400	2.0	14.0		250	1.25	8.75		200	1.0	7.0		900	4.5	31.5		450	2.25	15.75		200	1.0	7.0	
Cream	.4	18.5	132	.52	24.42		150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75	
Meat, hamburger steak	3.6	10.4	82	2.95	8.52		83	2.98	8.63		84	3.02	8.73		66	2.37	6.86		84	3.02	8.73		88	3.17	9.15	
Eggs	1.9	10.0					67	1.27	6.7		81	1.53	8.1						50	.95	5.0		94	1.78	9.4	
Potatoes, boiled	.33		111	.36			67	.22			115	.37							112	.36			165	.54		
Potatoes, baked sweet	.27		76	.2			150	.35			112	.3			45	.12			109	.29			97	.26		
Baked beans	1.3	.6	235	3.05	1.41		237	3.08	1.42		268	3.48	1.6		177	2.3	1.06		229	2.97	1.37		253	3.28	1.51	
Gravy	.15	4.0	69	.1	2.76		67	.1	2.68		70	.11	2.8		67	.1	2.68		67	.1	2.68		70	.11	2.8	
Corn flakes	1.0		18	.18			46	.46											26	.26			49	.49		
Apple pudding	.04	2.0	123	.05	2.46		158	.06	3.16		171	.06	3.42		128	.05	2.56		168	.06	3.36		195	.07	3.9	
Corn-starch pudding	.69	3.0	106	.73	3.18		145	1.0	4.35		121	.83	3.63		122	.84	3.66		140	.96	4.2		144	.99	4.32	
Tomatoes	.13		70	.09			67	.08			105	.13			41	.05			90	.11			83	.1		
Peaches	.13		67	.08			177	.23			176	.23			152	.19			132	.17			163	.21		
Coffee			400				400												150				400			
Ice tea											400								200							
Total			1,891	14.13	130.29		2,064	14.18	128.1		2,030	14.61	168.46		2,246	13.53	145.68		2,208	15.1	156.68		2,278	16.87	148.22	

Daily food chart—Continued.

DATE: SEPTEMBER 30.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	212	3.13	3.13		93	1.39	1.39		231	3.46	3.46		88	1.32	1.32		103	1.54	1.54		207	3.1	3.1	
Butter		84.0	66		55.44		26		21.84		126		105.84		60		50.4		63		52.92		94		78.96	
Sugar			126				120				73				144				79				105			
Milk	.5	3.5	700	3.5	24.5		260	1.3	9.1		200	1.0	7.0		950	4.75	33.25		450	2.25	15.75		260	1.3	9.1	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast beef	6.2	3.1	116	7.19	3.59		123	7.62	3.81		117	7.25	3.62		122	7.56	3.78		125	7.75	3.87		127	7.87	3.93	
Eggs	1.5	10.0					74	1.11	7.4		113	1.69	11.3						91	1.36	9.1		102	1.53	10.2	
Potatoes, boiled	.33		230	.75			206	.67			294	.97							188	.62			309	1.01		
Baked beans	1.2	2.5	182	2.18	4.55		150	1.8	3.75		164	1.96	4.1						110	1.32	2.75		146	1.75	3.65	
Gravy	.38	.7	124	.47	.86		128	.48	.89		138	.52	.96		131	.49	.91		142	.53	.99		141	.53	.98	
String beans	.27		52	.14			72	.19			65	.18							73	.19			65	.18		
Corn flakes	1.0		20	.2			50	.5							26	.26			24	.24			70	.70		
Chocolate pudding	.36	1.2	23	.08	.27		122	.43	1.46		130	.46	1.56		152	.54	1.82		162	.58	1.94		162	.58	1.94	
Banana pudding	.6	3.0	113	.67	3.39		163	.97	4.89		188	1.12	5.64		146	.87	4.38		161	.97	4.83		182	1.09	5.46	
Bananas	.12		146	.17			154	.18			101	.12			152	.18			119	.13			133	.15		
Coffee			200				400												150				400			
Ice tea							200				400								200							
Total			2,220	18.92	116.08		1,851	17.08	74.88		2,050	19.17	163.83		2,081	16.41	116.21		2,000	17.92	114.04		2,213	20.23	137.67	

DATE: OCTOBER 1.

Bread	1.5	1.5	227	3.4	3.4	636	145	2.17	2.17	306	197	2.95	2.95	552	92	1.38	1.38	257	104	1.56	1.56	291	203	3.04	3.04	568
Butter	.....	84.0	68	.....	57.12	531	72	.....	60.48	562	115	.....	96.6	898	84	.....	70.56	656	34	.....	28.56	266	103	.....	86.52	804
Sugar	.....	.....	100	.....	.....	410	129	.....	.....	529	122	.....	.....	500	126	.....	.....	517	36	.....	.....	148	125	.....	.....	513
Milk	.5	3.5	400	2.0	14.0	268	200	1.0	7.0	134	200	1.0	7.0	134	900	4.5	31.5	603	700	3.5	24.5	469	200	1.0	7.0	134
Cream	.4	18.5	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221
Meat, steak	5.0	10.1	139	6.95	14.03	309	141	7.05	14.24	313	145	7.25	14.64	322	153	7.65	15.45	350	150	7.5	15.15	333	156	7.8	15.75	346
Eggs	1.5	10.0	.....	.....	.....	.....	121	1.81	12.1	158	147	2.2	14.7	192	.....	.....	.....	.....	86	1.29	8.6	113	107	1.6	10.7	140
Potatoes, boiled	.33	.....	259	.85	.....	259	153	.5	.....	153	289	.95	.....	289	52	.17	.....	52	253	.83	.....	253	286	.94	.....	286
Carrots	.13	.....	33	.....	.....	15	.....	.....	.....	.....	63	.08	.....	28	.....	.....	.....	.....	51	.06	.....	23	.....	.....	.....	.....
Rice	.25	.....	95	.23	.....	100	116	.29	.....	122	104	.26	.....	110	109	.27	.....	114	100	.25	.....	105	114	.28	.....	120
Gravy	.34	11.1	135	.45	14.98	151	126	.42	13.98	141	132	.44	14.65	148	118	.4	13.09	132	124	.42	13.76	139	124	.42	13.76	139
Corn flakes	1.0	.....	31	.31	.....	114	49	.49	.....	180	26	.26	.....	95	15	.15	.....	55	40	.4	.....	147	44	.44	.....	162
Apple pudding	.27	2.0	27	.07	.54	24	113	.3	2.26	101	144	.38	2.88	127	133	.35	2.66	118	190	.51	3.8	169	130	.35	2.6	116
Dates	.2	.....	108	.21	.....	383	118	.23	.....	419	132	.26	.....	468	133	.26	.....	473	162	.32	.....	575	140	.28	.....	497
Tomatoes	.13	.....	89	.11	.....	20	129	.16	.....	30	110	.14	.....	25	129	.16	.....	30	120	.15	.....	28	20	.....	.....	5
Coffee	.....	.....	400	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	.....	.....	.....	400	.....	.....	.....
Ice tea	.....	.....	.....	.....	.....	.....	200	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	.....	.....	1,821	15.09	124.42	3,441	1,722	14.86	132.58	3,369	2,036	16.61	173.77	4,109	2,154	15.73	154.99	3,578	2,260	17.23	116.28	3,280	1,862	16.59	159.72	4,051

DATE: OCTOBER 2.

Bread	1.5	1.5	274	4.11	4.11	.....	31	0.46	0.46	.....	206	3.09	3.09	.....	47	0.7	0.7	.....	169	2.53	2.53	.....	178	2.67	2.67	.....
Butter	.....	84.0	76	.....	63.84	.....	17	.....	14.28	.....	116	.....	97.44	.....	43	.....	36.12	.....	70	.....	58.8	.....	81	.....	68.04	.....
Sugar	.....	.....	89	.....	.....	.....	140	.....	.....	.....	104	.....	.....	.....	74	.....	.....	.....	85	.....	.....	.....	91	.....	.....	.....
Milk	.5	3.5	400	2.0	14.0	.....	120	.6	4.2	.....	200	1.0	7.0	.....	900	4.5	31.5	.....	700	3.5	24.5	.....	200	1.0	7.0	.....
Cream	.4	18.5	100	.4	18.5	.....	100	.4	18.5	.....	50	.2	9.25	.....	100	.4	18.5	.....	100	.4	18.5	.....	100	.4	18.5	.....
Meat, steak	4.3	13.7	80	3.44	10.96	.....	78	3.35	10.68	.....	76	3.26	10.41	.....	.....	.....	.....	.....	83	3.56	11.37	.....	76	3.26	10.41	.....
Meat, roast lamb	4.8	8.0	58	2.78	4.64	.....	62	2.97	4.96	.....	69	3.31	5.52	.....	62	2.97	4.96	.....	70	3.36	5.6	.....	66	3.16	5.28	.....
Potatoes, boiled	.38	.....	291	1.1	.....	.....	.....	.....	.....	.....	262	.99	.....	.....	.....	.....	.....	.....	219	.83	.....	.....	261	.99	.....	.....
Eggs	1.4	10.0	.....	.....	.....	.....	132	1.84	13.2	.....	146	2.04	14.6	.....	.....	.....	.....	.....	101	1.4	10.1	.....	89	1.24	8.9	.....
Squash	.2	.....	90	.18	.....	.....	103	.2	.....	.....	107	.21	.....	.....	42	.08	.....	.....	114	.23	.....	.....	107	.21	.....	.....
Escalloped tomatoes	.41	.....	106	.43	.....	.....	130	.53	.....	.....	149	.61	.....	.....	101	.41	.....	.....	161	.66	.....	.....	113	.46	.....	.....
Cream of wheat	.12	.....	130	.15	.....	.....	247	.29	.....	.....	233	.27	.....	.....	174	.2	.....	.....	218	.26	.....	.....	239	.28	.....	.....
Squash pudding	.72	2.0	68	.48	1.36	.....	.....	.....	.....	.....	141	1.01	2.82	.....	92	.66	1.84	.....	145	1.04	2.9	.....	165	1.18	3.3	.....
Gravy	.45	3.6	129	.58	4.64	.....	126	.56	4.53	.....	142	.63	5.11	.....	97	.43	3.49	.....	144	.64	5.18	.....	143	.64	5.14	.....
Cantaloupe	.08	.....	218	.17	.....	.....	156	.12	.....	.....	190	.15	.....	.....	203	.16	.....	.....	175	.14	.....	.....	137	.1	.....	.....
Prunes	.12	.....	122	.14	.....	.....	106	.12	.....	.....	116	.13	.....	.....	91	.1	.....	.....	126	.15	.....	.....	.....	.....	.....	.....
Coffee	.....	.....	400	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	.....	.....	.....	400	.....	.....	.....
Ice tea	.....	.....	.....	.....	.....	.....	200	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	.....	.....	2,231	15.96	122.05	.....	1,548	11.44	70.81	.....	2,307	16.90	155.24	.....	2,026	10.61	97.11	.....	2,680	18.70	139.48	.....	2,046	15.59	129.24	.....

Daily food chart—Continued.

DATE: OCTOBER 3.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	200	3.0	3.0		61	0.91	0.91		186	2.79	2.79		152	2.28	2.28		167	2.5	2.5		262	3.93	3.93	
Butter		84.0	81		68.04		17		14.28		107		89.88		73		61.32		70		58.8		122		102.48	
Sugar			116				126				89				133				94				102			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		450	2.25	15.75		200	1.0	7.0	
Cream	.4	18.5	60	.24	11.1		60	.24	11.1		60	.24	11.1		60	.24	11.1		60	.24	11.1		60	.24	11.1	
Meat, roast pork	5.2	19.8	67	3.48	13.26		22	1.14	4.35		69	3.58	13.66		78	4.05	15.44		79	4.1	15.64		82	4.26	16.23	
Eggs	1.8	10.0					81	1.45	8.1		162	2.91	16.2						61	1.09	6.1		97	1.74	9.7	
Potatoes, boiled	.33		118	.38																			76	.25		
Potatoes, baked sweet	.31		97	.3			89	.27			113	.35			16	.05			125	.38			124	.38		
Baked beans	1.4	2.4	186	2.6	4.46						242	3.38	5.8		61	.85	1.46		176	2.46	4.22		190	2.66	4.56	
Gravy	.53	4.0	62	.32	2.48		70	.37	2.8		73	.38	2.92		73	.38	2.92		148	.78	5.92		74	.39	2.96	
Soup	.14		208	.29			197	.27			213	.29			366	.51			214	.29			242	.33		
Corn flakes	1.0		28	.28			54	.54			23	.23			17	.17			27	.27			54	.54		
Lemon pudding	.34	1.2	61	.2	.73						110	.37	1.32		101	.34	1.21		113	.38	1.35		104	.35	1.24	
Tomatoes	.13		112	.14			100	.13			102	.13			126	.16			122	.15			117	.15		
Peaches	.13		94	.12			120	.15			119	.15			92	.11			127	.16			102	.13		
Pears	.07		60				16				139	.1			97	.07			188	.13			133	.09		
Coffee			400				400												150				400			
Ice tea											400								200							
Total			1,950	13.35	117.07		1,213	6.47	48.54		2,007	15.9	150.67		2,345	13.71	127.23		2,221	15.18	121.38		2,141	16.44	159.2	

DATE: OCTOBER 4.

Bread	1.5	1.5	203	3.04	3.04		24	0.36	0.36		214	3.21	3.21		127	1.9	1.9		159	2.38	2.38		228	3.42	3.42	
Butter		84.0	60		50.4						143		120.12		85		71.4		85		71.4		106		89.04	
Sugar			95				118				111				100				67				122			
Milk	.5	3.5	400	2.0	14.0		450	2.25	15.75		200	1.0	7.0		1,150	5.75	40.25		700	3.5	24.5		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast pork	5.0	16.0	66	3.3	10.56						70	3.5	11.2		71	3.55	11.36		75	3.75	12.0		69	3.45	11.04	
Meat, steak	4.8	10.0	84	4.03	8.4		87	4.17	8.7		94	4.51	9.4		90	4.32	9.0		92	4.41	9.2		97	4.65	9.7	
Potatoes, baked	.42		95	.39			59	.24			132	.55							79	.33			133	.55		
Potatoes, baked sweet	.27		135	.36							132	.35							98	.26			145	.39		
Eggs	2.0	10.0					84	1.68	8.4		109	2.18	10.9						59	1.18	5.9		69	1.38	6.9	
Cauliflower	.27		15				40	.11			33	.09							49	.14			46	.12		
Baked beans	1.3	2.4	238	3.09	5.71						121	1.57	2.9						65	.84	1.56		127	1.65	3.04	
Gravy	.48	4.0	138	.66	5.52		65	.31	2.6		136	.65	5.44		140	.67	5.6		137	.65	5.48		139	.66	5.56	
Corn flakes	1.0		20	.2			56	.56			37	.37			32	.32			42	.42			60	.6		
Lemon pudding	.34	1.2	17	.05	.2										88	.26	1.05		124	.42	1.48		96	.32	1.15	
Apple pudding	.06	2.0	77	.05	1.54		108	.06	2.16		164	.09	3.28		161	.09	3.22		186	.11	3.72		155	.09	3.1	
Tomato soup	.33		211	.69			192	.63			227	.74			143	.47			222	.73			224	.73		
Bananas	.12		111	.13			110	.13			106	.12			118	.14			120	.14			107	.12		
Coffee			400				400												150				400			
Ice tea							200				400															
Total			2,075	18.43	119.72		1,503	10.94	58.32		2,139	19.37	193.8		2,415	17.91	164.13		2,469	19.7	157.97		2,233	19.57	160.3	

DATE: OCTOBER 5.

Bread	1.5	1.5	129	1.93	1.93	361	102	1.53	1.53	286	200	3.0	3.0	560	123	1.84	1.84	344	177	2.65	2.65	496	234	3.51	3.51	655
Butter		84.0	47		39.48	367	43		36.12	336	124		104.16	968	79		66.36	617	76		63.84	594	98		82.32	765
Sugar			107			439	150			615	114			467	150			615	122			500	116			476
Milk	.5	3.5	400	2.0	14.0	268	200	1.0	7.0	134	200	1.0	7.0	134	900	4.5	31.5	603	700	3.5	24.5	469	200	1.0	7.0	134
Cream	.4	18.5	50	.2	9.25	101	100	.4	18.5	201	100	.4	18.5	201	100	.4	18.5	201	100	.4	18.5	201	100	.4	18.5	201
Meat, hash steak	1.9	5.0	118	2.24	5.9	137	115	2.18	5.75	133	113	2.14	5.65	131	117	2.22	5.85	136	116	2.2	5.8	135	129	2.45	6.45	150
Meat, roast beef	5.4	13.6	57	3.07	7.75	151	69	3.72	9.38	183	69	3.72	9.38	183	66	3.56	8.97	174	71	3.83	9.65	188	71	3.83	9.65	188
Potatoes, baked	.42		297	1.24		297	82	.34		82	289	1.21		289					253	1.06		253	298	1.25		298
Eggs	1.5	10.0					81	1.21	8.1	106	136	2.04	13.6	178					102	1.53	10.2	134	101	1.52	10.1	132
Tomatoes	.13		192	.25		44	139	.18		32	207	.26		48	153	.19		35	276	.35		63	137	.17		32
Gravy	.24	4.0	130	.31	5.2	56	133	.31	5.32	57	135	.32	5.4	58	114	.27	4.56	49	138	.33	5.52	59	138	.33	5.52	59
Corn flakes	1.0		24	.24		88	44	.44		161	27	.27		99	33	.33		121	39	.39		143	36	.36		132
Apple sauce	.13		42	.06		68	103	.13		168	114	.15		186	112	.14		183	124	.16		202	128	.17		209
Cantaloupe	.08		157	.12		64	105	.08		43	102	.08		42	150	.12		62	176	.14		72	102	.08		42
Rice	.26		98	.25		103	126	.32		132	133	.34		140					120	.31		126	104	.26		109
Coffee			200				400												150				400			
Ice tea							200				400															
Total			1,848	11.91	83.51	2,544	1,592	11.84	91.7	2,669	2,063	14.93	166.69	3,684	2,097	13.57	137.58	3,140	2,590	16.85	140.66	3,635	1,992	15.33	143.05	3,582

Daily food chart—Continued.

DATE: OCTOBER 6.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	166	2.49	2.49	...	139	2.08	2.08	...	228	3.42	3.42	...	150	2.25	2.25	...	84	1.26	1.26	...	189	2.83	2.83	...
Butter	...	84.0	80	...	67.2	...	54	...	45.36	...	135	...	113.4	...	117	...	98.28	...	63	...	52.92	...	101	...	84.84	...
Sugar	...	...	30	...	...	...	133	...	...	...	83	...	...	...	56	...	...	...	116	...	...	...	138	...	...	...
Milk	.5	3.5	250	1.25	8.75	...	200	1.0	7.0	...	200	1.0	7.0	...	1,100	5.5	38.5	...	200	1.0	7.0	...	200	1.0	7.0	...
Cream	.4	18.5	100	.4	18.5	...	110	.44	20.35	...	160	.64	29.6	...	160	.64	29.6	...	160	.64	29.6	...	160	.64	29.6	...
Meat, roast veal	4.4	7.2	81	3.56	5.83	...	80	3.52	5.76	...	84	3.69	6.04	...	36	1.58	2.59	...	82	3.6	5.9	...	85	3.74	6.12	...
Eggs	2.0	10.0	...	...	...	...	74	1.48	7.4	...	123	2.46	12.3	...	...	...	...	...	69	1.38	6.9	...	58	1.16	5.8	...
Potatoes, boiled	.33	...	157	.51	...	...	...	...	...	...	205	.67	...	...	...	...	...	...	89	.29	...	...	300	1.0	...	...
Corn flakes	1.0	...	...	...	...	...	62	.62	...	...	26	.26	...	...	20	.2	...	...	20	.2	...	...	53	.53	...	...
Baked beans	1.1	1.7	372	4.09	6.32	...	200	2.2	3.4	...	411	4.52	6.98	...	150	1.65	2.55	...	203	2.23	3.45	...	198	2.17	3.36	...
Gravy	.34	1.8	63	.21	1.13	...	...	...	...	...	69	.23	1.24	...	20	.06	.36	...	73	.24	1.31	...	69	.23	1.24	...
String beans	.21	...	40	.08	...	...	45	.09	...	...	38	.07	...	...	...	...	...	...	47	.09	...	...	49	.1	...	...
Slaw (cabbage)	.24	...	43	.1	...	...	36	.08	...	...	...	...	...	...	...	...	...	...	69	.16	...	...	44	.1	...	...
Banana pudding	.28	2.0	151	.42	3.02	...	136	.38	2.72	...	308	.86	6.16	...	320	.89	6.4	...	355	.99	7.1	...	293	.82	5.86	...
Dates	.2	...	...	...	...	...	88	.17	...	...	93	.18	...	...	95	.19	...	...	114	.22	...	...	105	.21	...	...
Coffee	...	...	200	...	...	...	400	...	...	...	...	...	...	...	...	...	...	...	150	...	...	...	400	...	...	...
Ice tea	...	...	...	...	...	...	200	...	...	...	400	...	...	...	...	...	...	...	400	...	...	...	...	...	...	...
Total	...	...	1,533	13.11	113.24	...	1,357	12.06	94.07	...	2,163	18.0	186.14	...	2,224	12.96	180.53	...	1,744	12.3	115.44	...	2,042	14.53	146.65	...

DATE: OCTOBER 7.

Bread	1.5	1.5	255	3.82	3.82		102	1.53	1.53		211	3.16	3.16		123	1.84	1.84		120	1.8	1.8		245	3.67	3.67	
Butter		84.0	65		54.6		35		29.4		124		104.16		106		89.04		44		36.96		100		84.0	
Sugar			105				136				116				122				109				102			
Milk	.5	3.5	400	2.0	14.0		209	1.0	7.0		450	2.25	15.75		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	120	.48	22.2		160	.64	29.6		160	.64	29.6		160	.64	29.6		160	.64	29.6		160	.64	29.6	
Meat, hash	2.8	11.0	97	2.71	10.67						98	2.74	10.78		50	1.4	5.5		98	2.74	10.78		93	2.6	10.23	
Meat, roast beef	5.7	12.5	66	3.76	8.25		69	3.93	8.62		69	3.93	8.62		74	4.21	9.25		77	4.38	9.62		76	4.33	9.5	
Potatoes, boiled	.33		89	.29			135	.44			124	.4							125	.41			106	.33		
Potatoes, boiled sweet	.23		116	.26			69	.15			135	.31			23	.05			123	.28			113	.25		
Eggs	2.6	10.0					104	2.7	10.4		108	2.8	10.8						69	1.79	6.9		49	1.27	4.9	
Baked beans	1.3	2.6	126	1.63	3.27		109	1.41	2.83		162	2.1	4.21						35	.45	.91		104	1.35	2.7	
Gravy	.24	4.0	132	.31	5.28		101	.24	4.04		137	.32	5.48		82	.19	3.28		214	.51	8.56		144	.34	5.76	
Corn flakes	1.0		17	.17			36	.36			25	.25			28	.28			34	.34			51	.51		
Tapioca pudding	.03		76				292	.09			336	.1			320	.09			372	.11			334	.1		
Tomatoes	.13		47	.06			119	.15			138	.17							151	.19			126	.15		
Peaches	.13		102	.13			104	.13			128	.16			111	.14			99	.13			99	.13		
Coffee			400				400												150				400			
Ice tea							200				400								400							
Total			1,813	15.62	122.09		1,771	12.77	93.42		2,521	19.33	192.56		2,099	13.34	170.01		2,030	14.77	112.13		2,102	16.67	157.36	

DATE: OCTOBER 8.

Bread	1.5	1.5	285	4.27	4.27		146	2.19	2.19		162	2.43	2.43		175	2.62	2.62		133	2.0	2.0		248	3.72	3.72	
Butter		84.0	52		43.68		50		42.0		92		77.28		147		123.48		36		30.24		99		83.16	
Sugar			95				140				132				163				114				118			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast pork	4.3	23.8	75	3.22	17.85		80	3.44	19.04		77	3.31	18.32		86	3.69	20.46		83	3.56	19.75		89	3.82	21.18	
Meat, roast beef	4.6	34.2	72	3.31	24.62		84	3.86	28.72		81	3.72	27.7		45	2.07	15.39		80	3.68	27.36		87	4.0	29.75	
Potatoes, boiled	.33		125	.41			59	.19			89	.29											133	.43		
Potatoes, boiled sweet	.27		150	.4			145	.39			158	.42			38	.1			172	.46			176	.47		
Turnips	.2		51	.1							73	.14							68	.13			82	.16		
Gravy	.4	12.0	134	.53	16.08		134	.53	16.08		135	.54	16.2		95	.38	11.4		208	.83	24.96		136	.54	16.32	
Cauliflower soup	.53		192	1.01			184	.97			224	1.18			244	1.29			249	1.31			167	.88		
Corn flakes	1.0		20	.2			47	.47			28	.28			28	.28			35	.35			50	.5		
Chocolate pudding	.87	1.2	33	.28	.39		147	1.27	1.76		270	2.34	3.24		201	1.74	2.41		283	2.46	3.39		271	2.35	3.25	
Eggs	1.6	10.0					98	1.56	9.8		133	2.12	13.3						82	1.31	8.2		124	1.98	12.4	
Bananas	.12		103	.12			118	.13			108	.12			113	.13			147	.17			144	.17		
Tomatoes	.13		112	.14			196	.24			124	.15			103	.13			106	.13			72	.09		
Coffee			400				400												150				400			
Ice tea							200				400								400							
Total			2,009	16.43	141.24		1,938	16.68	146.94		2,196	18.48	185.82		2,448	17.37	227.61		2,106	17.83	143.25		2,306	20.55	197.13	

Daily food chart—Continued.

DATE: OCTOBER 9.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	195	2.92	2.92	546	81	1.21	1.21	227	189	2.83	2.83	529	100	1.5	1.5	280	84	1.26	1.26	235	218	3.27	3.27	610
Butter	.....	84.0	49	.....	41.16	383	36	.....	30.24	281	113	.....	94.92	882	76	.....	63.84	594	38	.....	31.92	297	106	.....	89.04	828
Sugar	.....	.....	251	.....	.....	1,029	155	.....	.....	636	99	.....	.....	406	123	.....	.....	504	137	.....	.....	562	158	.....	.....	648
Milk	.5	3.5	400	2.0	14.0	268	200	1.0	7.0	134	200	1.0	7.0	134	900	4.5	31.5	603	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	90	.36	16.65	181	90	.36	16.65	181	.....	.....	.....	.....	60	.24	11.1	120	60	.24	11.1	120	90	.36	16.65	181
Meat, roast beef	5.2	9.8	111	5.77	10.87	249	70	3.64	6.86	157	128	6.65	12.54	287	40	2.08	3.92	90	142	7.38	13.91	318	135	7.02	13.23	302
Eggs	1.6	10.0	.....	.....	.....	.....	116	1.85	11.6	155	113	1.8	11.3	151	.....	.....	.....	.....	71	1.13	7.1	95	108	1.72	10.8	144
Potatoes, boiled	.33	.....	114	.37	.....	114	60	.19	.....	60	139	.45	.....	139	.....	.....	.....	.....	60	.19	.....	60	111	.36	.....	111
Potatoes, boiled sweet	.27	.....	85	.22	.....	106	.....	.....	.....	.....	95	.25	.....	119	.....	.....	.....	.....	97	.26	.....	121	84	.22	.....	105
Escalloped tomatoes	.24	.....	74	.17	.....	42	119	.28	.....	68	119	.28	.....	68	.....	.....	.....	.....	150	.36	.....	86	124	.29	.....	71
Gravy	.27	3.7	138	.37	5.1	55	65	.17	2.4	26	132	.35	4.88	54	.....	.....	.....	.....	128	.34	4.73	52	121	.32	4.47	50
Rice	.26	.....	79	.2	.....	83	92	.23	.....	97	94	.24	.....	99	102	.26	.....	107	90	.23	.....	94	98	.25	.....	103
Corn flakes	1.0	.....	20	.2	.....	73	43	.43	.....	158	30	.3	.....	110	24	.24	.....	88	43	.43	.....	158	51	.51	.....	187
Custard	1.0	4.5	57	.57	2.56	105	153	1.53	6.88	281	148	1.48	6.66	272	143	1.43	6.43	263	106	1.06	4.77	195	179	1.79	7.05	329
Boiled onions	.1	.....	29	.....	.....	6	60	.06	.....	13	81	.08	.....	18	31	.....	.....	7	73	.07	.....	17	79	.08	.....	18
Peaches	.13	.....	197	.25	.....	185	223	.28	.....	210	75	.1	.....	71	190	.24	.....	178	218	.28	.....	205	198	.26	.....	186
Coffee	.....	.....	400	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150	.....	.....	.....	400	.....	.....	.....
Ice tea	.....	.....	.....	.....	.....	.....	200	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	.....
Total	.....	.....	1,889	13.40	93.26	3,425	1,563	11.23	82.84	2,684	1,755	15.81	140.13	3,339	1,789	10.49	118.29	2,834	1,697	14.23	81.79	2,749	2,060	17.45	151.51	4,007

DATE: OCTOBER 10.

Bread	1.5	1.5	228	3.42	3.42	....	114	1.71	1.71	....	225	3.37	3.37	....	83	1.24	1.24	....	100	1.5	1.5	....	220	3.3	3.3	....
Butter	....	84.0	82	....	68.88	....	45	....	37.8	....	146	....	122.64	....	58	....	48.78	....	87	....	73.08	....	104	....	87.36	....
Sugar	....	....	89	....	....	....	163	....	....	....	107	....	....	....	144	....	....	....	114	....	....	....	109	....	....	....
Milk	.5	3.5	400	2.0	14.0	....	200	1.0	7.0	....	200	1.0	7.0	....	650	3.25	22.75	....	200	1.0	7.0	....	200	1.0	7.0	....
Cream	.4	18.5	160	.64	29.6	....	160	.64	29.6	....	160	.64	29.6	....	160	.64	29.6	....	160	.64	29.6	....	160	.64	29.6	....
Meat, roast beef	5.1	14.6	53	2.7	7.73	....	57	2.9	8.32	....	58	2.95	8.46	....	28	1.42	4.08	....	57	2.9	8.32	....	60	3.06	8.76	....
Eggs	1.9	10.0	....	....	....	....	84	1.59	8.4	....	82	1.55	8.2	....	....	....	....	....	73	1.38	7.3	....	87	1.65	8.7	....
Potatoes, boiled	.33	....	134	.44	....	....	....	....	....	....	130	.42	....	....	....	....	....	....	77	.25	....	....	101	.33	....	....
Potatoes, baked sweet	.27	....	117	.31	....	....	....	....	....	....	....	....	....	....	....	....	....	....	122	.32	....	....	88	.23	....	....
Baked beans	1.1	1.8	353	3.88	6.35	....	331	3.64	5.95	....	264	2.9	4.75	....	171	1.88	3.07	....	207	2.27	3.72	....	247	2.71	4.44	....
Gravy	.37	5.3	61	.22	3.23	....	58	.21	3.07	....	61	.22	3.23	....	33	.12	1.74	....	63	.23	3.33	....	60	.22	3.18	....
Corn flakes	1.0	....	23	.23	....	....	54	.54	....	....	29	.29	....	....	31	.31	....	....	41	.41	....	....	50	.5	....	....
Gelatin	.46	....	194	.89	....	....	117	.53	....	....	285	1.31	....	....	212	.97	....	....	284	1.3	....	....	287	1.32	....	....
Apples	.02	....	34	....	....	....	126	....	....	....	184	....	....	....	144	....	....	....	154	....	....	....	145	....	....	....
Tomatoes	.13	....	113	.14	....	....	124	.15	....	....	113	.14	....	....	72	.09	....	....	106	.13	....	....	129	.15	....	....
Coffee	....	....	400	....	....	....	400	....	....	....	....	....	....	....	....	....	....	....	150	....	....	....	400	....	....	....
Ice tea	....	....	....	....	....	....	200	....	....	....	400	....	....	....	....	....	....	....	400	....	....	....	....	....	....	....
Total	....	....	2,041	14.87	133.21	....	1,633	12.91	101.85	....	2,044	14.79	187.25	....	1,786	9.92	111.26	....	1,845	12.33	133.85	....	2,047	15.11	152.34	....

DATE: OCTOBER 11.

Bread	1.5	1.5	210	3.15	3.15	....	102	1.53	1.53	....	264	3.96	3.96	....	159	2.38	2.38	....	67	1.0	1.0	....	175	2.62	2.62	....
Butter	....	84.0	44	....	36.96	....	58	....	48.72	....	161	....	135.24	....	135	....	113.4	....	51	....	42.84	....	83	....	69.72	....
Sugar	....	....	112	....	....	....	130	....	....	....	103	....	....	....	150	....	....	....	111	....	....	....	107	....	....	....
Milk	.5	3.5	400	2.0	14.0	....	150	.75	5.25	....	200	1.0	7.0	....	650	3.25	22.75	....	200	1.0	7.0	....	200	1.0	7.0	....
Cream	.4	18.5	160	.64	29.6	....	160	.64	29.6	....	160	.64	29.6	....	160	.64	29.6	....	160	.64	29.6	....	160	.64	29.6	....
Meat, roast beef	5.5	12.9	37	2.03	4.77	....	43	2.36	5.54	....	47	2.56	6.06	....	41	2.25	5.28	....	48	2.64	6.19	....	49	2.69	6.32	....
Meat, roast veal	4.3	6.7	51	2.19	3.41	....	58	2.49	3.88	....	54	2.32	3.61	....	56	2.4	3.75	....	54	2.32	3.61	....	60	2.58	4.02	....
Potatoes, boiled	.33	....	111	.36	....	....	....	....	....	....	172	.56	....	....	....	....	....	....	82	.27	....	....	84	.28	....	....
Potatoes, boiled sweet	.11	....	147	.16	....	....	107	.11	....	....	150	.17	....	....	54	.59	....	....	169	.18	....	....	132	.15	....	....
Baked beans	1.4	1.6	146	2.04	2.33	....	154	2.15	2.46	....	173	2.42	2.76	....	64	.89	1.02	....	130	1.82	2.08	....	157	2.19	2.51	....
Gravy	.31	1.3	118	.37	1.53	....	63	.19	.81	....	121	.37	1.57	....	62	.19	.8	....	122	.37	1.58	....	122	.37	1.58	....
Corn flakes	1.0	....	25	.25	....	....	70	.7	....	....	27	.27	....	....	26	.26	....	....	27	.27	....	....	38	.38	....	....
Vanilla cream pudding	.55	4.0	123	.67	4.92	....	97	.54	3.88	....	266	1.46	10.64	....	232	1.27	9.28	....	250	1.37	10.0	....	260	1.43	10.40	....
Vegetable soup	.26	.5	207	.53	1.03	....	223	.57	1.11	....	278	.72	1.39	....	281	.73	1.4	....	239	.62	1.19	....	252	.65	1.26	....
Bananas	.12	....	123	.14	....	....	140	.16	....	....	128	.15	....	....	140	.16	....	....	140	.16	....	....	126	.15	....	....
Eggs	2.1	10.0	....	....	....	....	68	1.42	6.8	....	124	2.6	12.4	....	....	....	....	....	70	1.47	7.0	....	71	1.49	7.1	....
Toast	1.6	1.6	24	.38	.38	....	30	.48	.48	....	31	.5	.5	....	18	.29	.29	....	37	.59	.59	....	35	.56	.56	....
Coffee	....	....	400	....	....	....	400	....	....	....	....	....	....	....	....	....	....	....	150	....	....	....	400	....	....	....
Ice tea	....	....	....	....	....	....	200	....	....	....	400	....	....	....	....	....	....	....	400	....	....	....	....	....	....	....
Total	....	....	2,038	14.91	102.08	....	1,653	14.09	110.06	....	2,459	19.72	214.73	....	2,228	15.30	189.95	....	1,957	14.72	112.68	....	2,111	17.18	142.69	....

Daily food chart—Continued.

DATE: OCTOBER 12.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	216	3.24	3.24	......	137	2.05	2.05	......	178	2.67	2.67	......	122	1.83	1.83	......	55	0.82	0.82	......	199	2.98	2.98	......
Butter	......	84.0	76	......	63.84	......	48	......	40.32	......	110	......	92.4	......	160	......	134.4	......	41	......	34.44	......	95	......	79.8	......
Sugar	......	......	101	......	......	......	146	......	......	......	130	......	......	......	141	......	......	......	116	......	......	......	98	......	......	......
Milk	.5	3.5	400	2.0	14.0	......	200	1.0	7.0	......	200	1.0	7.0	......	900	4.5	31.5	......	200	1.0	7.0	......	200	1.0	7.0	......
Cream	.4	18.5	170	.68	31.45	......	170	.68	31.45	......	170	.68	31.45	......	170	.68	31.45	......	170	.68	31.45	......	170	.68	31.45	......
Meat, roast lamb	4.3	8.0	44	1.89	3.52	......	54	2.32	4.32	......	57	2.45	4.56	......	35	1.5	2.8	......	63	2.7	5.04	......	63	2.7	5.04	......
Meat, veal	5.0	11.3	55	2.75	6.21	......	59	2.95	6.66	......	51	2.55	5.76	......	61	3.05	6.89	......	61	3.05	6.89	......	58	2.9	6.55	......
Potatoes, boiled	.33	......	246	.81	......	......	......	......	......	......	307	1.01	......	......	......	......	......	......	135	.44	......	......	261	.86	......	......
Eggs	2.3	10.0	......	......	......	......	67	1.54	6.7	......	110	2.53	11.0	......	......	......	......	......	12	.27	1.2	......	71	1.63	7.1	......
Rice	.32	......	154	.49	......	......	158	.5	......	......	153	.48	......	......	156	.49	......	......	163	.52	......	......	138	.44	......	......
Gravy	.34	9.6	62	.21	5.95	......	67	.22	6.43	......	112	.38	10.75	......	21	.07	2.01	......	132	.44	12.67	......	132	.44	12.67	......
Bean soup	.34	.6	278	.94	1.66	......	286	.97	1.71	......	316	1.07	1.89	......	311	1.05	1.86	......	343	1.16	2.05	......	319	1.08	1.91	......
Corn flakes	1.0	......	15	.15	......	......	52	.52	......	......	34	.34	......	......	29	.29	......	......	25	.25	......	......	42	.42	......	......
Tomatoes	.13	......	117	.15	......	......	110	.14	......	......	110	.14	......	......	113	.15	......	......	140	.18	......	......	57	.07	......	......
Apples	.02	......	112	......	......	......	59	......	......	......	296	.06	......	......	229	.05	......	......	322	.06	......	......	312	.06	......	......
Bananas	.12	......	56	.06	......	......	70	.08	......	......	63	.07	......	......	54	.06	......	......	74	.08	......	......	75	.09	......	......
Toast	1.6	1.6	27	.43	.43	......	31	.5	.5	......	......	......	......	......	29	.46	.46	......	34	.54	.54	......	32	.51	.51	......
Coffee	......	......	400	......	......	......	400	......	......	......	......	......	......	......	......	......	......	......	150	......	......	......	400	......	......	......
Ice tea	......	......	......	......	......	......	200	......	......	......	400	......	......	......	......	......	......	......	350	......	......	......	......	......	......	......
Total	......	......	2,129	13.80	130.30	......	1,714	13.47	107.14	......	2,397	15.43	167.48	......	2,531	14.18	213.20	......	2,086	12.19	102.10	......	2,322	15.86	155.01	......

DATE: OCTOBER 13.

Bread	1.5	1.5	217	3.25	3.25	607	114	1.71	1.71	319	175	2.62	2.62	490	99	1.48	1.48	277	84	1.26	1.26	235	173	2.59	2.59	484
Butter		84.0	86		72.24	671	88		73.92	687	122		102.48	953	145		121.8	1,132	53		44.52	414	91		76.44	711
Sugar			106			435	175			717	109			447	143			586	136			558	168			689
Milk	.5	3.5	400	2.0	14.0	268	200	1.0	7.0	134	200	1.0	7.0	134	650	3.25	22.75	435	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	160	.64	29.6	321	160	.64	29.6	321	160	.64	29.6	321	147	.58	27.19	295	160	.64	29.6	321	160	.64	29.6	321
Meat, roast pork	43.00	17.0	84	3.61	14.28	224	69	2.96	11.73	185	77	3.31	13.09	206	83	3.56	14.11	222	71	3.05	12.07	190	73	3.13	12.41	196
Meat, beef, sirloin	5.2	17.0	74	3.84	12.58	215	65	3.38	11.05	189	75	3.9	12.75	218	64	3.32	10.88	186	76	3.95	12.92	220	77	4.0	13.09	224
Potatoes, boiled	.33		156	.51		156	116	.38		116	147	.48		147	87	.28		87	108	.34		108	91	.3		91
Potatoes, baked sweet	.27		170	.45		212	234	.63		293	114	.3		142	151	.4		189	179	.48		224	183	.49		228
Stewed tomatoes	.16		104	.16		44	105	.16		44	109	.17		46					91	.15		38	25			10
Gravy	.4	15.5	123	.49	19.06	189	124	.49	19.22	190	131	.52	20.3	202	100	.4	15.5	154	198	.79	30.69	305	130	.52	20.15	201
Corn flakes	1.0		22	.22		81	54	.54		198	22	.22		81	19	.19		70	27	.27		99	52	.52		191
Chocolate pudding	1.3	1.2	28	.36	.33	34	210	2.73	2.52	258	262	3.4	3.14	322	127	1.65	1.52	158	225	2.92	2.7	277	220	2.86	2.64	271
Peaches	.13		127	.16		119	129	.16		120	129	.15		120	133	.17		125	116	.14		109	114	.14		107
Eggs	1.8	10.0					101	1.81	10.1	140	159	2.86	15.9	221					61	1.09	6.1	85	107	1.92	10.7	149
Cabbage	.24						27	.06		7	51	.12		14					62	.14		17	47	.11		13
Coffee			400				400												150				400			
Ice tea							200				400								400							
Total			1,857	15.69	165.34	3,576	1,971	16.65	166.85	3,918	2,042	19.69	206.88	4,064	1,948	15.28	215.23	3,916	1,847	16.21	146.86	3,334	1,911	18.22	174.62	4,020

DATE: OCTOBER 14.

Bread	1.5	1.5	182	2.73	2.73		135	2.02	2.02		187	2.8	2.8		109	1.63	1.63		60	0.9	0.9		203	3.05	3.05	
Butter		84.0	75		63.0		84		70.56		124		104.16		149		125.16		75		63.0		131		110.04	
Sugar			89				181				120				136				91				88			
Milk	.5	3.5	450	2.25	15.75		156	.78	5.46		30	.15	1.05		650	3.25	22.75		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	160	.64	29.6		150	.6	27.75		160	.64	29.6		160	.64	29.6		160	.64	29.6		160	.64	29.6	
Meat, hash	1.3	6.5	91	1.18	5.91		92	1.19	5.98		95	1.23	6.17		63	.81	4.09		96	1.24	6.24		100	1.3	6.5	
Meat, roast beef	5.6	4.1	53	2.96	2.17						61	3.41	2.5		54	3.02	2.21		39	2.18	1.59		71	3.97	2.91	
Potatoes, boiled	.33		203	.67			176	.58			141	.46							124	.4			114	.37		
Potatoes, baked sweet	.27		159	.42			85	.23			153	.41			26	.07			83	.22			148	.39		
Stewed tomatoes	.16		114	.18			104	.16			115	.18			108	.17			128	.2						
Cauliflower soup	.49	.2	248	1.21	.49		242	1.18	.48		269	1.31	.53		280	1.37	.56		266	1.3	.53		247	1.21	.49	
Gravy	.46	.4	60	.27	2.4						69	.31	2.76		17	.07	.68		61	.28	2.44		60	.27	2.4	
Corn flakes	1.0		17	.17			41	.41			21	.21			20	.2			20	.2			35	.35		
Banana pudding	.76	3.2	100	.76	3.2		138	1.04	4.41		159	1.2	5.08		168	1.27	5.38		172	1.3	5.5		164	1.24	5.25	
Peach pudding	.76	3.2	12	.09	.38						127	.96	4.06		133	1.01	4.26		137	1.04	4.38		134	1.01	4.29	
Toast	1.6	1.6	28	.45	.45		41	.66	.66		43	.69	.69		31	.5	.5		41	.66	.66		29	.46	.46	
Apple sauce	.13		11				130	.17			179	.23			149	.18			184	.24			191	.25	.25	
Eggs	2.1	21.0					14	.29	2.94		46	.96	9.66						64	1.34	13.44		50	1.05	10.5	
Coffee			200				350				200								150				400			
Ice tea							200				400								400							
Total			2,052	13.98	126.08		1,769	9.31	120.26		2,099	15.15	169.06		2,253	14.19	196.82		2,001	13.14	135.28		2,125	16.56	182.74	

Daily food chart—Continued.

DATE: OCTOBER 15.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	127	1.9	1.9		212	3.23	3.23		254	3.81	3.81		114	1.71	1.71		84	1.26	1.26		205	3.07	3.07	
Butter		84.0	54		45.36		90		75.6		129		108.36		102		85.68		55		46.2		73		61.32	
Sugar			79				178				111				134				156				135			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	60	.24	11.1		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast veal	5.2	9.9	53	2.75	5.34		103	5.35	10.19		112	5.82	11.08		115	5.98	11.38		106	5.51	10.49		108	5.61	10.69	
Eggs	1.7	9.5					114	1.93	10.83		149	2.53	14.15						85	1.44	8.07		126	2.14	11.97	
Potatoes, boiled	.33		138	.45			186	.61			281	.92			74	.24			185	.61			240	.79		
Gravy	.24	4.0	88	.21	3.52		126	.3	5.04		119	.28	4.76		104	.24	4.16		126	.3	5.04		119	.28	4.76	
Corn flakes	1.0		30	.3			70	.7							31	.31			40	.4			56	.56		
Custard	1.1	6.0	35	.38	2.1		124	1.36	7.44		150	1.65	9.0		121	1.33	7.26		142	1.56	8.52		127	1.39	7.62	
Gelatin	.36						179	.64			200	.72			112	.4			184	.66			185	.66		
Tomatoes	.13		24				241	.31			234	.3			107	.13			228	.3			116	.14		
Peaches	.13		102	.13											106	.13			116	.14			67	.08		
Coffee			200				400												150				400			
Ice tea							200				400								400							
Total			1,190	8.36	83.32		1,933	15.87	139.68		2,049	17.47	178.51		2,130	15.41	162.04		1,817	13.62	106.93		1,867	16.16	126.78	

DATE: OCTOBER 16.

Bread	1.5	1.5	178	2.67	2.67		240	3.6	3.6		217	3.2	3.2		120	1.8	1.8		90	1.35	1.35		161	2.41	2.41	
Butter		84.0	62		52.08		108		90.72		128		107.52		106		89.04		36		30.24		67		56.28	
Sugar			72				65				70				124				81				83			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	100	.4	18.5		100	.4	18.5		50	.2	9.25		100	.4	18.5		100	.4	18.5		100	.4	18.5	
Meat, pork sausage	2.5	7.4	121	3.02	8.95		82	2.05	6.06		101	2.52	7.47		81	2.02	5.99		97	2.42	7.17		87	2.17	6.4	
Meat, steak	4.6	7.4	56	2.57	4.14		67	3.08	4.95		71	3.26	5.25		32	1.47	2.36		70	3.22	5.18		79	3.63	5.83	
Potatoes, boiled	.33		174	.57			121	.39			141	.46							78	.25			92	.3		
Potatoes, baked sweet	.27		152	.41			194	.52			280	.75			180	.48			224	.6			162	.43		
Gravy	.22	4.7	138	.3	6.48		138	.3	6.48		139	.3	6.53						140	.3	6.58		138	.3	6.48	
Corn flakes	1.0		22	.22			52	.52			19	.19			18	.18			26	.26			50	.5		
Custard pudding	.51	1.2	202	1.03	2.42		248	1.26	2.97		282	1.43	3.38		266	1.35	3.19		306	1.56	3.67		297	1.51	3.56	
Tomatoes	.13		97	.12			108	.14			111	.14			100	.13			115	.15						
Apple sauce	.13						173	.22							148	.18			148	.18			181	.24		
Steak	5.6	4.5									51	2.85	2.29													
Coffee			400				400												130				400			
Ice tea							200				400								400							
Total			1,774	13.31	109.24		1,896	13.48	140.28		1,860	16.30	151.89		2,275	12.51	152.38		1,711	11.69	79.69		1,697	12.89	106.50	

DATE: OCTOBER 17.

Bread	1.5	1.5	173	2.59	2.59	484	130	1.95	1.95	334	207	3.1	3.1	579	94	1.41	1.41	263	80	1.2	1.2	224	228	3.42	3.42	638
Butter		84.0	83		69.72	648	62		52.08	484	123		103.32	960	89		74.76	696	50		42.0	390	155		130.2	1,110
Sugar			101			405	172			705	97			398	125			513	132			541	91			373
Milk	.5	3.5	400	2.0	14.0	268	200	1.0	7.0	134	200	1.0	7.0	134	900	4.5	31.5	603	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221
Meat, steak	6.0	7.3	49	2.94	3.57	109	57	3.42	4.16	126	58	3.48	4.23	128	44	2.64	3.21	98	60	3.6	4.38	133	64	3.84	4.67	142
Eggs	1.5	10.0					94	1.41	9.4	123	143	2.14	14.3	187					76	1.14	7.6	100	113	1.69	11.3	148
Potatoes, boiled	.33		172	.56		172	76	.25		76	161	.53		161	65	.21		65	99	.32		99	81	.26		81
Potatoes, baked sweet	.27		174	.46		218																	190	.51		238
Slaw (cabbage)	.24		34	.08		10													70	.16		19	51	.12		14
Baked beans	1.2	1.8	429	5.14	7.72	579	249	2.98	4.48	336	288	3.45	5.18	389	69	.82	1.24	93	186	2.23	3.34	251	245	2.94	4.41	331
Gravy	.23	2.6	65	.14	1.69	20	76	.17	1.97	23	68	.15	1.76	20	43	.98	1.11	13	68	.15	1.76	20	69	.15	1.79	21
Corn flakes	1.0		23	.23		84	72	.72		264	28	.28		93	24	.24		85	30	.3		110	71	.71		260
Custard pudding	1.1	4.5	74	.81	3.33	136	76	.83	3.42	140	106	1.16	4.77	195	72	.79	3.24	132	104	1.14	4.68	191	82	.9	3.69	151
Baked apple pudding	.65	4.0	112	.73	4.48	100	137	.89	5.48	121	149	.97	5.96	133	89	.58	3.56	79	170	1.11	6.80	151	148	.97	5.92	132
Bananas	.12		136	.16		126	125	.14		116					147	.18		139	158	.18		147	152	.18		141
Tomatoes	.13		93	.12		22	73	.09		17	96	.13		22	133	.17		31	121	.15		28				
Coffee			400				400												150				400			
Ice tea							200				400								400							
Total			2,228	16.40	127.45	3,602	1,709	14.29	110.29	3,220	1,834	16.83	169.97	3,620	2,004	12.96	140.38	3,031	1,714	13.12	99.11	2,759	2,050	17.13	192.75	4,135

Daily food chart—Continued.

DATE: OCTOBER 18.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	182	2.73	2.73	....	125	1.87	1.87	....	206	3.09	3.09	....	155	2.32	2.32	....	97	1.45	1.45	....	143	2.14	2.14	....
Butter	....	84.0	88	....	73.92	....	43	....	36.12	....	152	....	127.68	....	143	....	120.12	....	60	....	50.4	....	58	....	48.72	....
Sugar	....	....	80	....	....	....	135	....	....	....	76	....	....	....	96	....	....	....	60	....	....	....	55	....	....	....
Milk	.5	3.5	400	2.0	14.0	....	200	1.0	7.0	....	200	1.0	7.0	....	900	4.5	31.5	....	200	1.0	7.0	....	200	1.0	7.0	....
Cream	.4	18.5	100	.4	18.5	....	100	.4	18.5	....	100	.4	18.5	....	100	.4	18.5	....	100	.4	18.5	....	50	.2	9.25	....
Meat, steak	4.6	7.4	66	3.04	4.88	....	63	2.89	4.66	....	70	3.22	5.18	....	55	2.53	4.07	....	76	3.49	5.62	....	80	3.68	5.92	....
Meat, roast pork	4.5	7.4	62	2.79	4.58	....	69	3.1	5.1	....	71	3.19	5.25	....	39	1.75	2.88	....	....	....	....	....	77	3.46	5.69	....
Potatoes, boiled	.33	....	99	.33	....	....	155	.5	....	....	160	.52	....	....	....	....	....	....	....	....	....	....	114	.37	....	....
Potatoes, baked sweet	.27	....	156	.42	....	....	....	....	....	....	204	.54	....	....	73	.19	....	....	138	.37	....	....	184	.49	....	....
Tomato soup	.09	.3	223	.2	.67	....	222	.2	.67	....	266	.24	.8	....	257	.23	.77	....	274	.24	.82	....	296	.26	.88	....
Baked beans	1.2	2.4	223	2.67	5.35	....	122	1.46	2.92	....	155	1.86	3.72	....	....	....	....	....	68	.81	1.63	....	140	1.68	3.36	....
Gravy	.29	3.6	125	.36	4.5	....	72	.2	2.59	....	129	.37	4.64	....	132	.38	4.75	....	142	.41	5.11	....	132	.38	4.75	....
Corn flakes	1.0	....	21	.21	....	....	43	.43	....	....	22	.22	....	....	27	.27	....	....	29	.29	....	....	57	.57	....	....
Vanilla cream pudding	.74	4.0	117	.86	4.68	....	186	1.37	7.44	....	211	1.56	8.44	....	162	1.2	6.48	....	179	1.32	7.16	....	212	1.56	8.48	....
Toast	1.6	1.6	36	.58	.58	....	32	.51	.51	....	30	.48	.48	....	26	.42	.42	....	33	.53	.53	....	29	.46	.46	....
Peaches	.13	....	115	.14	....	....	164	.21	....	....	161	.2	....	....	79	.1	....	....	148	.19	....	....	153	.2	....	....
Eggs	2.0	10.0	....	....	....	....	84	1.68	8.4	....	122	2.44	12.2	....	....	....	....	....	82	1.64	8.2	....	87	1.74	8.7	....
Coffee	....	....	400	....	....	....	400	....	....	....	....	....	....	....	....	....	....	....	150	....	....	....	200	....	....	....
Ice tea	....	....	....	....	....	....	200	....	....	....	400	....	....	....	....	....	....	....	400	....	....	....	....	....	....	....
Total	....	....	2,093	16.73	134.39	....	1,815	15.82	95.78	....	2,335	19.33	196.98	....	2,244	14.29	191.81	....	1,686	12.14	106.42	....	2,067	18.19	105.35	....

DATE: OCTOBER 19.

Bread	1.5	1.5	189	2.83	2.83		125	1.87	1.87		143	2.14	2.14		75	1.12	1.12		47	0.7	0.7		135	2.02	2.02	
Butter		84.0	122		102.48		98		82.32		121		101.64		204		171.36		77		64.68		85		71.4	
Sugar			68				114				69				59				28				72			
Milk	.55	3.5	855	4.7	29.92		420	2.31	14.7		230	1.26	8.05		867	4.76	30.34		655	3.6	22.92		407	2.23	14.24	
Cream	.4	18.5	150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75		150	.6	27.75	
Meat, hash	3.5	11.0	55	1.92	6.05		63	2.2	6.93		57	1.99	6.27		50	1.75	5.5		67	2.34	7.37		72	2.52	7.92	
Meat, roast veal	4.7	5.9	64	3.0	3.77		64	3.0	3.77		65	3.05	3.83		43	2.02	2.53		75	3.52	4.42		65	3.05	3.83	
Potatoes, boiled	.33		100	.33			187	.61			125	.41							95	.32			121	.39		
Potatoes, baked	.42		129	.54			114	.48			150	.63							97	.41			12'	.53		
Onions	.1		64	.06			71	.07			97	.1			40				84	.08			102	.1		
Gravy	.3	1.0	123	.36	1.23		129	.38	1.29		127	.38	1.27		44	.13	.44		131	.39	1.31		136	.4	1.36	
Corn flakes	1.0		22	.22			24	.24											24	.24			23	.23		
Custard	.86	1.2	100	.86	1.2		162	1.39	1.94		159	1.36	1.9		159	1.36	1.9		203	1.74	2.43		132	1.13	1.58	
Toast	1.6	1.6	104	1.66	1.66		116	1.86	1.86		51	.82	.82		102	1.63	1.63		104	1.66	1.66		103	1.65	1.65	
Pears	.07		93	.06			129	.08			126	.08			112	.08			136	.09			113	.08		
Eggs	1.9	10.0					90	1.71	9.0		98	1.86	9.8										87	1.65	8.7	
Coffee			200				400																400			
Ice tea							200				600								200							
Total			2,238	17.14	176.89		2,056	16.80	151.43		1,768	14.68	163.47		1,905	13.45	242.57		1,973	15.69	133.24		1,930	16.58	140.45	

DATE: OCTOBER 20.

Bread	1.5	1.5	227	3.4	3.4		202	3.03	3.03		179	2.68	2.68		131	1.96	1.96		32	0.48	0.48		229	3.43	3.43	
Butter		84.0	67		56.28		106		89.04		130		109.2		106		89.04		34		28.56		89		74.76	
Sugar			91				169				115				209				142				120			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	150	.6	27.75		150	.6	27.75		100	.4	18.5		150	.6	27.75		150	.6	27.75		150	.6	27.75	
Meat, roast beef	5.4	14.7	97	5.23	14.25		113	6.1	16.61		128	6.91	18.81		87	4.69	12.78		131	7.07	19.25		122	6.58	17.93	
Eggs	2.2	10.0					90	1.98	9.0		98	2.15	9.8						52	1.14	5.2		111	2.44	11.1	
Potatoes, baked	.42		145	.61			145	.61			159	.67							165	.69			138	.58		
Potatoes, baked sweet	.27		171	.46			161	.43			157	.42			64	.17			110	.29			104	.28		
Gravy	.35	7.4	126	.44	9.32		129	.45	9.54		134	.46	9.91		128	.44	9.47		141	.49	10.43		130	.45	9.62	
Corn flakes	1.0		19	.19			40	.4			23	.23			32	.32			30	.3			45	.45		
Chocolate pudding	.8	1.2	51	.41	.61		123	.98	1.47		233	1.86	2.79		167	1.33	2.0		296	2.36	3.55		262	2.09	3.14	
Bananas	.12		114	.13			149	.18							133	.15			161	.19			169	.2		
Tomatoes	.13		138	.17			186	.24			189	.24			187	.24			192	.24			101	.13		
Coffee			400				400												150				400			
Ice tea							200				400								400							
Total			1,796	13.64	125.61		1,963	16.00	163.44		1,845	17.02	178.69		2,294	14.40	174.50		1,836	14.85	102.22		1,970	18.23	154.73	

Daily food chart—Continued.

DATE: OCTOBER 21.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	205	3.07	3.07		157	2.35	2.35		191	2.86	2.86		135	2.02	2.02		55	0.82	0.82		141	2.11	2.11	
Butter		84.0	97		81.48		115		96.6		147		123.48		155		130.2		78		65.52		92		77.28	
Sugar			94				179				103				137				87				110			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast beef	5.9	11.5	44	2.59	5.06		47	2.77	5.4		53	3.12	6.09		39	2.3	4.48		51	3.0	5.86		53	3.12	6.09	
Eggs	1.6	9.0					64	1.02	5.76		116	1.85	10.44						56	.89	5.04		57	.91	5.13	
Potatoes, boiled	.33		110	.34			115	.37			101	.33											81	.26		
Potatoes, baked sweet	.27		145	.39			200	.54			140	.37			79	.21			194	.52			172	.46		
Cauliflower	.27		65	.18			75	.2			85	.23							84	.23			62	.17		
Rice	.25		69	.17			86	.21			89	.22			94	.23			84	.21			98	.25		
Gravy	.24	4.0	61	.14	2.4		62	.14	2.48		63	.15	2.52						123	.29	4.92		60	.14	2.4	
Baked beans	1.4	2.8	238	3.33	6.66		207	2.89	5.79		253	3.54	7.08		103	1.44	2.88		210	2.94	5.88		198	2.77	5.54	
Corn flakes	1.0		25	.25			57	.57			22	.22			26	.26			24	.24			55	.55		
Banana pudding	.46	2.0	49	.22	.98		138	.63	2.76		135	.62	2.70		132	.6	2.64		132	.6	2.64		131	.6	2.62	
Corn bread	.77	8.5	34	.26	2.89		112	.78	9.52										77	.59	6.54		130	1.0	11.05	
Fried apples	.04		56				118	.05			167	.06			124	.05			108				155	.06		
Coffee			400				400												150				400			
Ice tea							200				400								500							
Total			1,802	13.38	136.89		2,042	13.96	158.01		1,975	15.01	182.52		2,034	12.05	194.07		1,673	11.77	124.57		1,905	13.84	139.57	

DATE: OCTOBER 22.

Bread	1.5	1.5	178	2.67	2.67	......	214	3.21	3.21	......	189	2.83	2.83	......	77	1.15	1.15	......	100	1.5	1.5	......	230	3.45	3.45	......
Butter	......	84.0	60	......	50.4	......	117	......	98.28	......	112	......	94.08	......	128	......	107.52	......	60	......	50.4	......	95	......	79.8	......
Sugar	......	......	72	......	......	......	206	......	......	......	122	......	......	......	109	......	......	......	66	......	......	......	77	......	......	......
Milk	.5	3.5	400	2.0	14.0	......	200	1.0	7.0	......	200	1.0	7.0	......	900	4.5	31.5	......	200	1.0	7.0	......	200	1.0	7.0	......
Cream	.4	18.5	170	.68	31.45	......	170	.68	31.45	......	60	.24	11.1	......	170	.68	31.45	......	170	.68	31.45	......	170	.68	31.45	......
Meat, pork	4.6	8.5	46	2.11	3.91	......	45	2.07	3.82	......	48	2.2	4.08	......	32	1.47	2.72	......	47	2.16	3.99	......	50	2.3	4.25	......
Meat, steak	4.5	8.5	55	2.47	4.67	......	52	2.34	4.42	......	56	2.52	4.76	......	34	1.53	2.89	......	53	2.38	4.5	......	58	2.61	4.93	......
Potatoes, boiled	.33	......	244	.8	......	......	142	.46	......	......	185	.61	......	......	85	.28	......	......	75	.24	......	......	123	.4	......	......
Potatoes, baked sweet	.27	......	122	.32	......	......	156	.42	......	......	140	.37	......	......	109	.29	......	......	205	.55	......	......	189	.51	......	......
Baked beans	1.1	2.7	154	1.69	4.15	......	......	......	......	......	153	1.68	4.13	......	38	.41	1.02	......	......	......	......	......	151	1.66	4.07	......
Gravy	.39	5.7	139	.54	7.92	......	115	.44	6.55	......	126	.49	7.18	......	55	.21	3.13	......	155	.6	8.83	......	131	.51	7.47	......
Corn flakes	1.0	......	18	.18	......	......	58	.58	......	......	27	.27	......	......	27	.27	......	......	26	.26	......	......	38	.38	......	......
Custard	.62	4.5	109	.67	4.9	......	146	.9	6.57	......	......	......	......	......	139	.86	6.25	......	129	.79	5.8	......	140	.86	6.3	......
Squash pudding	.5	2.0	34	.17	.68	......	130	.65	2.60	......	154	.77	3.08	......	76	.38	1.52	......	173	.86	3.46	......	166	.84	3.32	......
Pears	.07	......	57	......	......	......	122	.09	......	......	......	......	......	......	47	......	......	......	111	.07	......	......	112	.07	......	......
Eggs	1.5	10.0	......	......	......	......	120	1.8	12.0	......	194	2.91	19.4	......	......	......	......	......	83	1.24	8.3	......	141	2.11	14.1	......
Coffee	......	......	400	......	......	......	400	......	......	......	......	......	......	......	......	......	......	......	150	......	......	......	400	......	......	......
Ice tea	......	......	......	......	......	......	200	......	......	......	600	......	......	......	......	......	......	......	400	......	......	......	......	......	......	......
Total	......	......	1,858	14.30	124.75	......	1,993	14.64	175.90	......	1,766	15.89	157.64	......	2,026	12.03	189.15	......	1,653	12.33	125.23	......	2,071	17.38	166.14	......

DATE: OCTOBER 23.

Bread	1.5	1.5	207	3.1	3.1	580	147	2.2	2.2	411	169	2.53	2.53	473	53	0.79	0.79	148	57	0.85	0.85	160	138	2.07	2.07	386
Butter	......	84.0	108	......	90.72	843	106	......	89.04	827	147	......	123.48	1,147	198	......	166.32	1,546	62	......	52.08	484	52	......	43.68	406
Sugar	......	......	63	......	......	258	176	......	......	721	81	......	......	332	140	......	......	574	100	......	......	410	74	......	......	303
Milk	.5	3.5	500	2.5	17.5	335	250	1.25	8.75	168	250	1.25	8.75	168	1,000	5.0	35.0	670	250	1.25	8.75	168	250	1.25	8.75	168
Cream	.4	18.5	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322	160	.64	29.6	322
Meat, roast beef hash	3.5	11.0	40	1.4	4.4	85	40	1.4	4.4	85	45	1.57	4.95	96	31	1.08	3.41	66	40	1.4	4.4	85	44	1.54	4.84	94
Meat, beef	5.4	7.1	35	1.89	2.48	71	38	2.05	2.69	77	44	2.37	3.12	90	22	1.18	1.56	45	43	2.32	3.05	88	46	2.48	3.26	92
Potatoes, baked	.42	......	314	1.32	......	314	307	1.29	......	307	264	1.11	......	264	169	.71	......	169	164	.69	......	164	222	.93	......	222
Eggs	1.6	10.0	......	......	......	......	112	1.79	11.2	150	133	2.12	13.3	178	......	......	......	......	78	1.24	7.8	105	61	.97	6.1	82
Escalloped tomatoes	.37	......	77	.28	......	44	122	.45	......	70	133	.49	......	76	......	......	......	......	192	.71	......	109	163	.6	......	93
Gravy	.25	.2	115	.28	.23	9	130	.32	.26	10	119	.29	.23	9	34	.09	.07	3	153	.38	.3	12	153	.38	.3	12
Chocolate pudding	.81	1.2	25	.2	.3	31	115	.93	1.38	141	117	.94	1.4	144	51	.41	.61	63	78	.63	.93	95	104	.84	1.24	128
Toast	1.8	1.8	83	1.49	1.49	251	88	1.58	1.58	266	69	1.24	1.24	208	88	1.58	1.58	266	107	1.92	1.92	323	91	1.63	1.63	275
Tomatoes	.13	......	112	.14	......	26	122	.15	......	28	107	.13	......	24	100	.13	......	23	120	.15	......	28	56	.07	......	13
Apple sauce	.13	......	117	.15	......	191	122	.15	......	198	173	.22	......	282	......	......	......	......	163	.21	......	265	175	.23	......	285
Oranges	.1	......	88	.09	......	47	144	.14	......	76	109	.11	......	58	107	.11	......	57	93	.09	......	49	93	.09	......	49
Coffee	......	......	500	......	......	......	400	......	......	......	......	......	......	......	......	......	......	......	150	......	......	......	400	......	......	......
Ice tea	......	......	......	......	......	......	200	......	......	......	400	......	......	......	......	......	......	......	400	......	......	......	......	......	......	......
Total	......	......	2,044	13.48	149.82	3,407	2,179	14.34	151.10	3,857	2,120	15.01	188.60	3,871	2,143	11.72	238.94	3,952	1,852	12.48	109.68	2,867	1,882	13.72	101.47	2,930

Daily food chart—Continued.

DATE: OCTOBER 24.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	171	2.56	2.56		176	2.64	2.64		211	3.16	3.16		100	1.5	1.5		132	1.98	1.98		235	3.52	3.52	
Butter		84.0	58		48.72		72		60.48		138		115.92		103		86.52		64		53.76		75		63.0	
Sugar			84				178				120				191				116				219			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		650	3.25	22.75		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	160	.64	29.6		160	.64	29.6		160	.64	29.6		100	.4	18.5		160	.64	29.6		160	.64	29.6	
Meat, veal	4.4	5.3	39	1.71	2.06		48	2.11	2.54		45	1.98	2.38		20	.88	1.06		42	1.84	2.22		41	1.8	2.17	
Potatoes, boiled	.33		171	.56							141	.46			49	.16			88	.29			114	.37		
Eggs	1.5	10.0					105	1.57	10.5		164	2.46	16.4						81	1.21	8.1		129	1.93	12.9	
Rice	.32		78	.24			77	.24							75	.24			86	.27			77	.24		
Gravy	.42	.5	65	.27	.32		73	.3	.36		72	.3	.36		17	.07	.08		71	.29	.35		72	.3	.36	
Baked beans	1.4	2.4	296	4.14	7.10		231	3.23	5.54		290	4.06	6.96		142	1.98	3.4		223	3.12	5.35		284	3.97	6.81	
Corn flakes	1.0		23	.23			78	.78			23	.23			24	.24			19	.19			49	.49		
Tomatoes	.13		106	.13			126	.16			110	.14			105	.13			122	.15			95	.12		
Bananas	.12		181	.21			200	.24			173	.2			202	.24			208	.25			200	.24		
Apple sauce	.13						148	.19							105	.13			106	.13			153	.19		
Coffee			400				400												150				200			
Ice tea							200				400								200							
Total			1,832	12.69	104.36		1,869	13.10	118.66		1,847	14.63	181.78		1,883	9.22	133.81		1,718	11.36	108.36		2,103	14.81	125.36	

DATE: OCTOBER 25.

Bread	1.5	1.5	107	1.6	1.6	300	98	1.47	1.47	274	153	2.29	2.29	428	110	1.65	1.65	308	111	1.66	1.66	311	143	2.14	2.14	400
Butter		84.0	82		68.88	640	69		57.96	539	143		120.12	1,117	136		114.24	1,062	79		66.36	617	84		70.56	656
Sugar			86			353	148			607	87			357	184			754	96			394	124			508
Milk	.5	3.5	400	2.0	14.0	268	200	1.0	7.0	134	200	1.0	7.0	134	900	4.5	31.5	600	96	.48	3.36	64	200	1.0	7.0	134
Cream	.4	18.5	125	.5	23.12	251	150	.6	27.75	302	100	.4	18.5	201	150	.6	27.75	302	150	.6	27.75	302	150	.6	27.75	302
Meat, roast veal	4.0	6.4	42	1.68	2.68	68	44	1.76	2.81	71	46	1.84	2.94	75	31	1.24	1.98	50	44	1.76	2.81	71	47	1.88	3.0	76
Meat, roast pork	4.2	17.4	49	2.05	8.52	132	49	2.05	8.52	132	49	2.05	8.52	132	36	1.51	6.26	97	51	2.14	8.87	137	51	2.14	8.87	137
Potatoes, boiled	.33		195	.64		195					130	.42		130	76	.25		76	103	.34		103	130	.42		130
Potatoes, baked, sweet	.27		293	.79		366	110	.28		138	72	.19		90					94	.25		118	98	.27		123
Baked beans	1.3	1.4	124	1.61	1.73	167					103	1.33	1.44	139					91	1.18	1.27	123	108	1.4	1.51	146
Gravy	.22	4.0	121	.26	4.84	52	56	.12	2.24	24	158	.34	6.32	68					162	.35	6.48	70	130	.28	5.2	56
Corn flakes	1.0		15	.15		55	53	.53		195	19	.19		70	21	.21		77	26	.26		95	82	.82		301
Vanilla cream pudding	.7	4.0	209	1.46	8.36	385	228	1.59	9.12	420	241	1.68	9.64	443	252	1.76	10.08	464	247	1.72	9.88	454	265	1.85	10.60	488
Toast	1.9	1.9	86	1.63	1.63	260	71	1.34	1.34	214	61	1.15	1.15	184	54	1.02	1.02	163	61	1.15	1.15	184	75	1.42	1.42	227
Tomato soup	.28		193	.54		62	196	.55		63	234	.65		76	224	.62		72	246	.68		79	261	.73		84
Oranges	.1		155	.16		82	253	.25		134	84	.08		45	197	.2		104	185	.19		98	135	.14		72
Eggs	2.1	10.0	73	1.53	7.3	107	103	2.16	10.3	151	57	1.19	5.7	84									62	1.3	6.2	91
Coffee			400				500												300				400			
Ice tea							200				400								200							
Total			2,355	16.60	142.66	3,743	1,828	13.70	128.51	3,398	1,937	14.80	183.62	3,773	2,371	13.56	194.48	4,129	1,842	12.76	129.59	3,220	2,145	16.39	144.25	3,931

DATE: OCTOBER 26.

Bread	1.2	1.5	314	3.76	4.71	879	240	2.88	3.6	672	273	3.27	4.09	764	96	1.15	1.44	269	168	2.01	2.52	470	245	2.94	3.67	686
Butter		84.0	70		58.8	547	97		81.48	758	126		105.84	984	116		97.44	906	59		49.56	461	87		73.08	679
Sugar			111			455	191			783	116			476	118			484	105			430	125			512
Milk	.5	3.5	470	2.35	16.45	315	200	1.0	7.0	134	200	1.0	7.0	134	900	4.5	31.5	603	200	1.0	7.0	134	200	1.0	7.0	134
Cream	.4	18.5	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221	110	.44	20.35	221
Meat, steak	4.0	18.1	107	4.28	19.36	286	115	4.6	20.81	312	124	4.96	22.44	336	68	2.72	12.3	184	116	4.64	20.99	313	120	4.8	21.72	325
Potatoes, boiled	.33		304	1.0		304	348	1.14		348	401	1.32		401	178	.58		178	218	.71		218	332	1.09		332
Eggs	1.5	10.0					104	1.56	10.4	136	159	2.38	15.9	208					78	1.17	7.8	102	113	1.69	11.3	148
Cauliflower	.27		45	.12		10	66	.18		15	75	.2		18					70	.19		16	72	.19		16
Slaw (cabbage)	.24		41	.1		11	34	.08		9									60	.14		16	40	.96		11
Gravy	.41	2.1	123	.5	2.58	37	178	.72	3.73	53	128	.52	2.68	38	78	.31	1.63	23	145	.59	3.04	43	198	.81	4.15	59
Corn flakes	1.0		25	.25		92	46	.46		169	18	.18		66	17	.17		62	17	.17		62	51	.51		187
Rice	.25		96	.24		101	96	.24		101	98	.25		103	94	.23		99	92	.23		97	102	.25		107
Apple sauce	.13		87	.11		132	117	.15		191	117	.15		191	118	.15		192	136	.18		222	136	.18		222
Bananas	.12		95	.11		88	111	.13		103	90	.11		83	201	.24		187	134	.16		125	135	.16		126
Coffee			400				400												150				400			
Ice tea							200				400								400							
Total			1,998	13.26	122.25	3,478	2,053	13.58	147.37	4,005	2,035	14.78	178.30	4,023	2,094	10.49	164.66	3,408	1,708	11.63	111.26	2,930	2,066	15.02	141.27	3,765

Daily food chart—Continued.

DATE: OCTOBER 27.

Kind of food.	Nitrogen.	Ether extract.	Subject I (H. N. B.).				Subject II (W. W. C.).				Subject III (A. G.).				Subject IV (O. F. L.).				Subject V (A. M. N.).				Subject VI (C. H. S.).			
			Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.	Amount of food.	Nitrogen.	Ether extract.	Estimated fuel value.
	P. ct.	*P. ct.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Casl.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*	*Gms.*	*Gms.*	*Gms.*	*Cals.*
Bread	1.5	1.5	321	4.81	4.81		205	3.07	3.07		210	3.15	3.15		61	0.91	0.91		94	1.41	1.41		216	3.24	3.24	
Butter		84.0	83		69.72		93		78.12		124		104.16		96		80.64		58		48.72		73		61.32	
Sugar			88				176				90				164				106				153			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0						650	3.25	22.75		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	100	.4	18.5		100	.4	18.5		50	.2	9.25		100	.4	18.5		100	.4	18.5		100	.4	18.5	
Meat, sausage	4.2	9.2	97	4.07	8.92		78	3.27	7.17		81	3.4	7.45		93	3.9	8.55		84	3.52	7.72		78	3.27	7.17	
Hash	2.6	36.3	51	1.32	18.51		55	1.43	19.96		52	1.35	18.87		31	.8	11.25		9	.23	3.26		51	1.32	18.51	
Potatoes, boiled	.33		141	.46			189	.62			145	.47			140	.41			94	.31			153	.5		
Potatoes, baked, sweet	.27		199	.54			183	.49			95	.25							187	.5			170	.45		
Gravy	.34	4.0	127	.43	5.08		122	.41	4.88		135	.45	5.4						139	.47	5.56		135	.45	5.4	
Corn flakes	1.0		12	.12			41	.41							19	.19			18	.18			41	.41		
Rice	.32		70	.22			63	.2			67	.21			87	.27			73	.23			83	.26		
Lemon pudding	.24	1.2	155	.37	1.86		135	.32	1.62		184	.44	2.2						114	.27	1.36		263	.63	3.15	
Tomatoes	.13		93	.12			121	.15			108	.14			126	.16			135	.17						
Oranges	.1		72	.07			86	.09							105	.11			88	.09			83	.08		
Eggs	1.7	10.0					77	1.3	7.7		141	2.39	14.1						77	1.3	7.7		65	1.1	6.5	
Coffee			400				400												300				400			
Ice tea							200				400								200							
Total			2,409	14.93	141.40		1,924	13.16	148.02		1,482	12.45	164.58		1,672	10.45	142.6		1,576	10.08	101.23		1,864	13.11	130.79	

DATE: OCTOBER 28.

Bread	1.5	1.5	248	3.72	3.72		127	1.9	1.9		238	3.57	3.57		100	1.5	1.5		105	1.57	1.57		221	3.31	3.31	
Butter		84.0	85		71.4		89		74.76		149		125.16		110		92.4		83		69.72		103		86.52	
Sugar			69				175				69				122				74				125			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0						900	4.5	31.5		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	120	.48	22.2		120	.48	22.2		100	.4	18.5		100	.4	18.5		100	.4	18.5		120	.48	22.2	
Meat, pork	5.0	8.6	51	2.55	4.38		44	2.2	3.78		47	2.35	4.04		48	2.4	4.12		46	2.3	3.95		50	2.5	4.3	
Eggs	1.7	10.0	59	1.0	5.9		81	1.37	8.1		139	2.36	13.9						87	1.49	8.7		84	1.42	8.4	
Potatoes, boiled	.33		193	.63			139	.45															113	.37		
Potatoes, baked, sweet	.27		240	.64			80	.21			166	.44			81	.21			169	.45			162	.43		
Turnips	.2		56	.11							80	.16							85	.17			77	.15		
Baked apples	.1		77	.08			145	.15			132	.13			85	.09			147	.15			119	.12		
Baked beans	1.1	2.4	193	2.12	4.63		197	2.16	4.72		201	2.21	4.82		129	1.41	3.09		169	1.85	4.05		193	2.12	4.63	
Gravy	.14	4.0	51	.07	2.04		53	.07	2.12		57	.07	2.28		61	.08	2.44		71	.09	2.84		61	.08	2.44	
Corn flakes	1.0		15	.15			81	.81							23	.23			54	.54			86	.86		
Lemon pudding	.42	.5	211	.88	1.05		234	.98	1.17		232	.97	1.16		81	.34	.4		244	1.02	1.22		225	.94	1.12	
Tomatoes	.13		101	.13			236	.3			108	.14			103	.13			100	.13						
Coffee			400				400												150				400			
Ice tea							200				400								400							
Total			2,169	14.56	129.32		1,951	12.08	125.75		1,718	12.80	173.43		1,943	11.29	153.95		1,734	11.16	117.55		1,939	13.78	139.92	

DATE: OCTOBER 29.

Bread	1.5	1.5	262	3.93	3.93		170	2.55	2.55		226	3.39	3.39		163	2.44	2.44		149	2.23	2.23		261	3.91	3.91	
Butter		84.0	76		63.84		72		60.48		116		97.44		158		132.72		86		72.24		122		102.48	
Sugar			96				148				102				214				92				121			
Milk	.5	3.5	400	2.0	14.0		200	1.0	7.0		200	1.0	7.0		650	3.25	22.75		200	1.0	7.0		200	1.0	7.0	
Cream	.4	18.5	110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35		110	.44	20.35	
Meat, roast beef	4.4	9.9	46	2.02	4.55		48	2.11	4.75		56	2.46	5.54		44	1.93	4.35		51	2.24	5.04		50	2.2	4.95	
Meat, steak	4.4	9.9	45	1.98	4.45		45	1.98	4.45		39	1.71	3.86		36	1.58	3.56		49	2.15	4.85		47	2.06	4.65	
Potatoes, boiled	.33		135	.45			142	.46			135	.44							96	.31			141	.46		
Potatoes, baked, sweet	.27		179	.48			221	.59			132	.35			36	.09			178	.48			137	.36		
Baked beans	.97	2.4	260	2.52	6.24		110	1.06	2.64		124	1.2	2.97										110	1.06	2.64	
Gravy	.14	1.0	91	.12	.91		106	.14	1.06		109	.15	1.09						126	.17	1.26		124	.17	1.24	
Flakes	1.0		19	.19			43	.43			25	.25			17	.17			22	.22			38	.38		
Prunes	.12		183	.22			200	.24			215	.26			114	.14			256	.31			234	.28		
Soup	.13		250	.32			250	.32			250	.32			250	.32			250	.32			250	.32		
Bananas	.12		112	.13			122	.14			90	.1			127	.15			131	.15			135	.16		
Eggs	1.5	10.0	42	.63	4.2		66	.99	6.6		111	1.66	11.1						55	.82	5.5		70	1.05	7.0	
Coffee			200				200												200				200			
Ice tea											200								200							
Total			2,306	15.43	122.47		2,053	12.45	109.88		2,040	13.63	152.74		1,919	10.51	186.17		1,851	10.84	118.47		2,150	13.85	154.22	

DISCUSSION OF RESULTS.

The figures in the above tables speak for themselves, but the most salient points for each subject may be best brought together by a presentation of certain of the results in the form of averages and ratios. Along with the data for the urine, the nitrogen and fat contents of the feces are given so as to facilitate the calculation of nitrogen and fat balances at the end of each period. The data concerning the nitrogen and fat intake are found in full in the complete food tables.

Two kinds of averages may be presented with advantage; in the one case the variations in the total nitrogen, urea, ammonia, purine, and other forms of nitrogen combination may be given, while in the other the data cover the percentage distribution of these forms. The short tables given below embrace condensations of this sort, as will be explained. Each subject will be followed through separately, and for each three tables will be presented. In the first we have the average daily output of certain forms of nitrogen in the five general periods into which the investigation may be divided—that is, in the fore period, the low preservative period (300 mg. daily), the first high preservative period (600 mg. daily), the second high preservative period (1 gm. daily), and finally the after period, with no preservative.

In the same table some data for sulphur and phosphorus will be given, and also figures for nitrogen and fat in the feces. The urine averages are secured by taking the means of the daily means, as given in the footings of the columns of the above main tables.

In the two tables to follow we have the average daily composition of the feces, obtained by dividing the period results by the number of days in the period, and finally the very important percentage distribution of the nitrogen and sulphur in the urine. The value for each constituent is expressed in terms of the total nitrogen and total sulphur excreted in each period. The total sulphur for the fore periods is omitted because of some uncertainty as to the correctness of part of the determinations.

In the tables following the term *period* is employed in a wider sense than in the charts. Here we have condensed the 16 periods, of about one week each, into five main periods, distinguished by the amount of benzoate added to the food.

SUBJECT I (H. N. B.).

As the food tables will show, this man enjoyed a good appetite throughout the tests, with the exception of one or two occasions, and we find in the analytical results nothing to indicate any deviation from the normal metabolism. It is true that there are rather wide variations in the output of the several urinary constituents, but

these are irregular and fail to disclose any relation to the benzoate given with the food in the later periods. The uric acid and creatinine are particularly constant, while for the ammonia, the sulphur, and the phosphorus the changes are not marked and are not systematic.

It will be noted that the nitrogen and the fat in the feces show marked changes in the after period; for the first an increase and for the second a decrease. As this behavior is found in all the subjects, it will be commented on later.

Daily means, Subject I.

Determination.	Fore period.	Low preservative.	First high preservative.	Second high preservative.	After period.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*
Total nitrogen	10.05	10.66	11.50	11.72	10.31
Urea nitrogen	8.08	8.92	9.54	9.82	8.54
Uric acid nitrogen	.18	.18	.19	.18	.17
Ammonia nitrogen	.47	.46	.52	.46	.41
Creatinine nitrogen	.59	.57	.57	.58	.55
Purine nitrogen	.072	.058	.099	.085	.093
Total sulphur	....	.75	.88	.84	.79
Total phosphorus	.91	.96	.93	.86	.88
Indican, Fehling=100	22.00	31.00	37.00	30.00	31.00
Total ether extract in feces ... grams	5.86	5.17	3.71	3.56	3.73
Ether extract as fraction of ingested fat ... per cent	5.21	4.49	3.18	2.93	2.86
Fraction of excreted nitrogen in feces ... do	21.7	19.3	15.3	14.4	24.0

Average daily composition of feces.

SUBJECT I (H. N. B.).

Period.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.	Total nitrogen.	Total ether extract.
No preservative:	*Grams.*	*Grams.*	*Per cent.*	*Per cent.*	*Per cent.*	*Grams.*	*Grams.*
1	243	30.90	87.27	1.4	3.2	3.40	7.77
2	180	32.94	81.66	1.36	1.7	2.46	3.05
3	199	35.59	82.13	1.3	3.4	2.59	6.77
Low preservative:							
4	177	33.39	81.15	1.7	2.5	3.01	4.43
5	224	48.76	78.19	1.6	3.1	3.58	6.93
6	186	36.97	80.11	1.3	2.9	2.42	5.39
7	167	32.16	80.76	1.3	3.3	2.17	5.52
8	171	30.28	82.28	1.3	2.8	2.22	4.78
9	149	29.31	80.27	1.5	3.2	2.23	4.75
10	152	32.04	78.88	1.4	3.9	2.12	5.92
11	141	28.20	79.97	1.7	2.4	2.39	3.38
High preservative:							
12	172	34.27	80.11	1.5	2.1	2.58	3.62
13	157	23.32	85.16	1.0	2.5	1.57	3.80
14	149	29.88	79.95	1.3	2.0	1.94	2.98
15	154	30.43	80.18	1.3	2.7	2.00	4.15
No preservative:							
16	233	47.60	79.59	1.4	1.6	3.27	3.73
Mean for 16 periods	178	33.50	83.42	1.4	2.7	2.49	4.81

Percentage distribution of nitrogen and sulphur in urine: Average value for each period in fractions of total nitrogen and total sulphur.

SUBJECT I (H. N. B.).

Period.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
No preservative:								
1	....	5.48	0.67	1.92	5.96	....	....	....
2	79.16	4.38	.86	1.78	5.95	....	....	....
3	82.11	4.33	.65	1.75	5.73	....	....	....
Low preservative:								
4	83.39	4.82	.59	1.90	6.88	....	....	....
5	82.11	4.57	.48	1.75	5.91	73.53	10.29	16.18
6	84.99	4.16	.65	1.76	5.21	76.32	11.04	12.64
7	84.58	3.87	.44	1.63	4.78	74.78	8.47	16.75
8	83.50	4.26	.55	1.71	4.88	74.84	8.39	16.77
9	84.31	4.20	.34	1.70	4.93	73.57	9.61	16.82
10	84.90	4.36	.70	1.62	5.04	74.35	8.36	17.29
11	83.10	4.66	.76	1.61	5.54	63.73	13.33	22.94
High preservative:								
12	82.71	4.55	.90	1.62	5.20	71.33	9.23	19.44
13	83.92	4.60	.80	1.75	4.86	72.79	9.50	17.71
14	85.09	3.95	.67	1.46	4.65	71.55	8.48	19.97
15	82.24	4.02	.78	1.62	5.28	70.00	10.38	19.62
No preservative:								
16	82.84	3.99	.90	1.63	5.32	70.82	9.51	19.66

SUBJECT II (W. W. C.).

Much the same condition may be noted here as with Subject I. The total output of nitrogen is larger and there are marked changes in it of an irregular character. Attention is called to the increased elimination of nitrogen and decreased ether extract in the feces of the after period, but aside from this there is nothing in the figures of the three tables to point to any possible connection between dosage and metabolism. If there appears to be a slight increase of purine nitrogen, we find that this does not hold for the other subjects. The variations in the uric acid and creatinine nitrogen follow just the reverse order noted in Subject I, and therefore are not sufficient to point to any systematic relationship. An apparently marked change is shown in the distribution of the total sulphur, as it seems to increase toward the end of the investigation. But this condition is continued into the after period, and besides does not hold for the other subjects throughout. Considering all points it is clearly evident that the variations found in the urines of these periods are not outside the normal limits which should be expected in work covering four months in time.

Daily means, Subject II.

Determination.	Fore period.	Low preservative.	First high preservative.	Second high preservative.	After period.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*
Total nitrogen	13.39	11.09	11.94	10.64	9.88
Urea nitrogen	11.05	9.52	10.30	8.80	8.14
Uric acid nitrogen	.21	.22	.20	.20	.18
Ammonia nitrogen	.47	.39	.47	.39	.30
Creatinine nitrogen	.66	.62	.65	.63	.60
Purine nitrogen	.07	.06	.096	.082	.08
Total sulphur	....	.84	.94	.81	.79
Total phosphorus	.95	.87	.87	.67	.78
Indican, Fehling=100	5.7	7.4	12.00	11.00	10.00
Total ether extract in feces, grams	5.68	5.49	5.45	4.59	3.83
Ether extract as fraction of ingested fat, per cent	4.74	4.69	5.32	3.59	2.88
Fraction of excreted nitrogen in feces, per cent	15.7	17.9	18.0	14.3	20.0

Average daily composition of feces.

SUBJECT II (W. W. C.).

Period.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.	Total nitrogen.	Total ether extract.
No preservative:	*Grams.*	*Grams.*	*Per cent.*	*Per cent.*	*Per cent.*	*Grams.*	*Grams.*
1	177	42.18	76.11	1.5	4.5	2.65	7.95
2	112	32.28	71.11	2.0	2.8	2.23	3.13
3	175	38.47	78.07	1.5	3.4	2.63	5.96
Low preservative:							
4	165	41.89	74.68	1.7	4.3	2.81	7.11
5	159	42.85	73.10	1.7	2.8	2.71	4.46
6	163	52.50	67.82	1.5	4.3	2.45	7.02
7	141	39.67	71.84	1.7	4.5	2.39	6.34
8	153	39.00	74.47	1.8	3.3	2.75	5.04
9	109	36.56	66.33	2.2	5.2	2.39	5.65
10	99	32.12	67.51	2.1	4.4	2.08	4.35
11	74	27.09	63.32	2.1	5.4	1.57	3.99
High preservative:							
12	128	33.87	73.48	2.0	3.5	2.55	4.47
13	207	44.13	78.71	1.3	3.1	2.69	6.43
14	134	31.67	76.37	1.5	4.5	2.01	6.03
15	83	26.59	68.00	1.9	3.8	1.58	3.16
No preservative:							
16	124	36.18	70.72	2.0	3.1	2.47	3.83
Mean for 16 periods	140	37.32	71.98	1.78	3.93	2.37	5.31

Percentage distribution of nitrogen and sulphur in urine: Average value for each period in fractions of total nitrogen and total sulphur.

SUBJECT II (W. W. C.).

Period.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
No preservative:								
1	....	3.45	0.49	1.43	4.44			
2	86.44	3.79	.63	1.67	5.20	....	....	....
3	84.53	3.40	.45	1.54	5.06	....	....	....
Low preservative:								
4	84.28	3.85	.58	1.71	5.93	....	....	....
5	84.14	4.21	.45	1.81	5.76	....	....	....
6	86.20	3.41	.65	1.81	5.70	78.40	9.22	12.37
7	83.35	3.55	.49	1.63	5.50	76.26	10.79	12.95
8	84.44	3.85	.44	1.82	5.64	79.07	8.07	12.86
9	85.10	3.23	.34	1.65	5.54	75.85	9.52	14.63
10	85.11	2.98	.55	1.45	5.54	77.46	9.06	13.48
11	85.82	3.11	.71	1.59	5.22	76.05	9.49	14.46
High preservative:								
12	84.91	3.76	.76	1.59	5.41	74.34	9.48	16.18
13	84.38	4.22	.86	1.83	5.44	75.68	8.43	15.89
14	83.55	4.13	.77	1.94	5.67	69.84	10.31	19.84
15	82.87	3.14	.76	1.78	6.18	71.82	9.77	18.42
No preservative:								
16	82.42	3.05	.81	1.85	6.03	69.78	9.53	20.68

SUBJECT III (A. G.).

This man performed a regular part of the analytical work of the investigation and was throughout perfectly normal in his diet and habits. The diet was comparatively hearty, as shown by the food charts and the output of nitrogen. In considering the condensed data of the following tables there is nothing very striking in the nitrogen metabolism to be specially noted. The total nitrogen excretion is highest in the fore period and lowest in the after period, as was the case with Subject II, but as this relation does not hold for all the men it is evidently without significance. The uric acid, ammonia, creatinine, and purine excretions are very regular, both in amount and distribution, and here, as in the other cases, there is a very good correspondence between the nitrogen and the total sulphur of the urine. There appears to be a tendency toward the increase of neutral sulphur in the after period, but the ethereal sulphates remain nearly constant throughout. While the neutral sulphur is high with the absence of preservative, it is also high in some of the periods where the preservative was high. In the case of Subject VI it will be seen that the highest neutral sulphur falls in a low preservative period. It is clear, therefore, that we can not draw any definite conclusions from this fact. The peculiarities in the nitrogen and fat ratios in the feces are in evidence here. The condition of metabolism shown by the tables is strictly normal.

Daily means, Subject III.

Determination.	Fore period.	Low preservative.	First high preservative.	Second high preservative.	After period.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*
Total nitrogen	13.62	11.99	12.27	12.68	11.28
Urea nitrogen	10.63	10.04	10.17	10.38	9.19
Uric acid nitrogen	.20	.20	.20	.20	.18
Ammonia nitrogen	.78	.65	.68	.71	.67
Creatinine nitrogen	.72	.68	.69	.72	.65
Purine nitrogen	.044	.041	.05	.05	.045
Total sulphur	....	.87	.98	.98	.87
Total phosphorus	1.07	.99	.98	.93	.70
Indican, Fehling=100	41.00	41.00	42.00	38.00	41.00
Total ether extract in feces, grams	5.64	5.64	4.02	6.57	4.26
Ether extract as fraction of ingested fat, per cent	3.53	3.58	2.33	3.76	2.44
Fraction of excreted nitrogen in feces, per cent	15.1	19.3	17.6	15.4	19.5

Average daily composition of feces.

SUBJECT III (A. G.).

Period.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.	Total nitrogen.	Total ether extract.
	Grams.	*Grams.*	*Per cent*	*Per cent.*	*Per cent.*	*Grams.*	*Grams.*
No preservative:							
1	203	30.20	85.19	1.1	2.2	2.23	4.46
2	213	32.20	84.45	.99	1.5	2.12	3.20
3	309	79.05	74.43	.96	2.8	2.97	8.66
Low preservative:							
4	217	35.26	83.76	1.1	3.1	2.39	6.73
5	239	50.07	79.05	1.2	2.5	2.87	5.98
6	215	54.32	75.35	1.2	2.4	2.57	5.15
7	198	35.51	82.09	1.2	2.4	2.38	4.76
8	208	36.20	82.62	1.2	3.2	2.50	6.67
9	215	40.89	81.26	1.3	2.3	2.80	4.95
10	248	39.26	84.17	1.1	2.1	2.84	5.21
11	259	42.65	83.56	2.1	2.2	5.45	5.71
High preservative:							
12	200	32.70	83.65	1.2	1.8	2.40	3.60
13	259	40.70	84.27	1.1	1.7	2.85	4.43
14	211	37.58	82.16	1.1	2.5	2.32	5.27
15	271	32.08	84.94	.9	2.9	2.44	7.87
No perservative:							
16	284	37.36	86.86	.96	1.5	2.73	4.26
Mean for 16 periods	234	40.93	82.36	1.17	2.32	2.74	5.43

Percentage distribution of nitrogen and sulphur in urine: Average value for each period in fractions of total nitrogen and total sulphur.

SUBJECT III (A. G.).

Period.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
No preservative:								
1	....	5.81	0.32	1.49	4.98	....	....	....
2	78.89	5.65	.34	1.54	5.15	....	....	....
3	81.42	5.64	.34	1.54	5.84	....	....	....
Low preservative:								
4	81.63	6.37	.46	1.87	6.02	....	....	....
5	82.85	6.20	.23	1.71	5.78	79.27	7.32	13.41
6	83.47	5.55	.44	1.64	5.76	76.92	8.33	14.70
7	82.59	5.35	.26	1.68	5.68	77.29	8.82	13.89
8	84.31	5.34	.23	1.63	5.53	76.68	9.23	14.08
9	83.25	4.81	.24	1.70	5.48	76.54	8.40	15.06
10	83.98	4.69	.48	1.76	5.72	74.17	8.61	17.22
11	82.89	5.17	.35	1.59	5.83	74.47	10.18	15.35
High preservative:								
12	82.15	5.65	.42	1.64	5.73	75.18	8.96	15.86
13	83.75	5.40	.41	1.61	5.50	76.87	7.76	15.37
14	82.35	5.17	.44	1.55	5.81	74.57	8.13	17.30
15	81.31	6.05	.40	1.67	5.60	75.62	7.69	16.68
No preservative:								
16	81.54	5.94	.39	1.57	5.79	73.53	8.33	18.14

SUBJECT IV (O. F. L.).

In this man the peculiarities of diet were extremely marked, and corresponding peculiarities of metabolism might naturally be looked for. Reference to the food tables will disclose the kind and amount of food preferred, of which milk was always a prominent item. A perfectly sufficient diet was consumed, however, throughout, with the exception of a short time in two periods, when the illness of a member of his family called him away over night. The urine and feces were saved, but for the time the food (carried with him) was

not abundant. This will account for the apparent negative balance. Aside from this the metabolism is remarkably normal and a good utilization of the food is evident. This is shown by the data for the nitrogen and the fat in the feces, as presented in the first of the following tables, and for the nitrogen elimination of all the periods, as shown in the second table following. It is not possible to discover any abnormal effect of the diet at any point of the whole four months of observation. If anything of this kind should obtain we should expect to find it in the distribution of the nitrogen of the urine, but here we discover a very uniform relation running from the beginning to the end, with no break at any point corresponding to the benzoate periods. The high neutral sulphur of one of the benzoate periods is matched by the same condition in the after period, and as a general conclusion we must look upon all the urines as normal and within natural limits.

Daily means, Subject IV.

Determination.	Fore period.	Low preservative.	First high preservative.	Second high preservative.	After period.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*
Total nitrogen	11.67	11.65	12.00	10.26	9.93
Urea nitrogen	10.47	9.96	10.39	8.53	8.30
Uric acid nitrogen	.13	.15	.15	.13	.14
Ammonia nitrogen	.49	.53	.54	.51	.47
Creatinine nitrogen	.60	.63	.62	.64	.60
Purine nitrogen	.06	.035	.038	.044	.04
Total sulphur	....	.79	.86	.76	.75
Total phosphorus	.93	1.00	.98	.81	.88
Indican, Fehling=100	5.7	11.00	7.9	9.2	12.7
Total ether extract in feces, grams	2.92	3.85	2.31	3.16	3.15
Ether extract as fraction of ingested fat, per cent	2.53	2.67	1.88	1.79	1.81
Fraction of excreted nitrogen in feces, per cent	13.4	10.6	7.9	9.2	12.7

Average daily composition of feces.

SUBJECT IV (O. F. L.)

Period.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.	Total nitrogen.	Total ether extract.
No preservative:	*Grams.*	*Grams.*	*Per cent.*	*Per cent.*	*Per cent.*	*Grams.*	*Grams.*
1	109	22.08	79.77	1.2	2.8	1.31	3.06
2	145	27.34	81.16	1.4	1.6	2.03	2.32
3	109	21.41	80.33	1.1	3.1	1.20	3.37
Low preservative:							
4	96	26.62	72.24	1.2	2.3	1.15	2.20
5	142	42.32	70.29	1.1	3.5	1.57	4.99
6	156	36.84	76.32	1.1	3.1	1.71	4.82
7	118	27.42	76.68	1.4	4.3	1.65	5.06
8	102	22.59	77.93	1.2	4.2	1.23	4.30
9	131	29.17	77.71	1.3	3.4	1.70	4.45
10	80	17.71	77.74	1.3	3.8	1.03	3.02
11	74	19.08	74.59	1.4	2.7	1.03	1.99
High preservative:							
12	70	16.26	76.86	1.4	2.8	.98	1.97
13	98	21.62	77.97	1.1	2.7	1.08	2.65
14	109	22.11	79.76	1.0	2.6	1.09	2.84
15	99	23.55	76.28	1.0	3.5	.99	3.48
No preservative:							
16	143	33.01	76.96	1.0	2.2	1.43	3.15
Mean for 16 periods	112	25.57	77.04	1.2	3.04	1.32	3.35

Percentage distribution of nitrogen and sulphur in urine: Average value for each period in fractions of total nitrogen and total sulphur.

SUBJECT IV (O. F. L.).

Period.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
No preservative:								
1	....	4.72	0.62	1.18	5.00	....	....	....
2	85.59	3.99	.56	1.06	5.04	....	....	....
3	83.17	4.02	.43	1.12	5.25	....	....	....
Low preservative:								
4	85.32	4.41	.32	1.23	6.18	....	....	....
5	84.81	5.07	.25	1.10	5.50	....	....	....
6	86.56	4.63	.48	1.22	5.65	82.63	6.31	11.05
7	85.45	4.64	.58	1.22	5.22	80.65	6.25	13.10
8	84.34	4.63	.27	1.18	5.09	80.33	6.11	13.56
9	85.80	4.44	.21	1.28	5.33	80.25	5.39	14.36
10	85.76	4.53	.54	1.25	5.54	80.57	6.04	13.39
11	86.38	4.32	.28	1.34	5.61	79.32	6.20	14.48
High preservative:								
12	86.89	4.54	.30	1.17	5.09	80.13	6.51	13.36
13	86.01	4.32	.31	1.30	5.25	77.04	8.67	14.29
14	83.63	4.80	.55	1.18	5.85	72.42	6.34	21.24
15	82.45	5.14	.42	1.37	6.50	73.72	7.55	18.73
No preservative:								
16	83.55	4.69	.39	1.40	6.06	72.35	6.63	21.02

SUBJECT V (A. M. N.).

This man carried a part of the analytical work on the urine and was kept busy through the day. His exercise was secured in playing handball and in walking, in which his habits were very regular. The diet sheet is not in any way unusual. A consideration of the analyses shows the same general trend disclosed in the other men, with the urine nitrogen lowest in the after period, however. Corresponding to this we have a rather high percentage of nitrogen in the feces. The excretion of creatinine, ammonia, uric acid, and sulphur and phosphorus are regular. The indican figures are relatively high, but not the highest. There is at present no explanation for the marked variations in this factor between different individuals, but no special significance can be attached to it, as similar results are found in the routine analyses of urines in general. The neutral sulphur in this and the last case does not appear to be markedly increased in the after period, as was evident in the other men. All the results here appear to be normal, with nothing to suggest a dependence on the ingested benzoate. The variations noted are not systematic enough to lead to any conclusion in this direction, except, perhaps, with reference to the fat and nitrogen of the feces in the after period, of which something will be said below.

Daily means, Subject V.

Determination.	Fore period.	Low preservative.	First high preservative.	Second high preservative.	After period.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*
Total nitrogen	11.28	10.33	12.14	11.20	9.48
Urea nitrogen	8.61	8.43	10.05	9.12	7.65
Uric acid nitrogen	.22	.21	.22	.21	.18
Ammonia nitrogen	.54	.49	.54	.55	.43
Creatinine nitrogen	.68	.67	.68	.70	.65
Purine nitrogen	.063	.059	.085	.070	.087
Total sulphur	....	.72	.93	.84	.75
Total phosphorus	.81	.78	.90	.81	.80
Indican, Fehling=100	28.00	32.00	34.00	35.00	34.00
Total ether extract in feces, grams	4.08	4.02	4.02	3.63	2.68
Ether extract as fraction of ingested fat, per cent	3.59	3.53	3.43	2.94	2.48
Fraction of excreted nitrogen in feces per cent	17.3	18.3	14.1	16.2	18.0

Average daily composition of feces.

SUBJECT V (A. M. N.).

Period.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.	Total nitrogen.	Total ether extract.
No preservative:	*Grams.*	*Grams.*	*Per cent.*	*Per cent.*	*Per cent.*	*Grams.*	*Grams.*
1	236	33.49	85.81	1.0	1.6	2.36	3.78
2	200	28.36	85.81	1.15	1.5	2.30	3.00
3	260	34.16	86.86	.93	2.1	2.42	5.46
Low preservative:							
4	153	27.72	81.89	1.3	1.9	1.99	2.91
5	205	34.15	83.33	1.2	2.1	2.46	4.30
6	225	42.26	81.22	1.2	2.2	2.56	4.95
7	253	34.49	86.39	1.1	2.0	2.79	5.07
8	123	24.23	80.34	1.5	2.3	1.85	2.84
9	218	34.79	84.04	1.3	2.0	2.83	4.36
10	165	27.99	83.05	1.2	2.4	1.98	3.96
11	165	31.70	80.78	1.3	2.3	2.14	3.78
High preservative:							
12	147	24.22	83.51	1.1	1.4	1.62	2.20
13	216	38.40	82.20	1.1	2.7	2.37	5.83
14	223	36.71	83.54	1.2	1.8	2.68	4.03
15	215	28.18	86.90	.8	1.5	1.72	3.23
No preservative:							
16	149	33.27	77.65	1.4	1.8	2.08	2.68
Mean for 16 periods	197	32.14	83.33	1.17	1.98	2.26	3.89

Percentage distribution of nitrogen and sulphur in urine: Average value for each period in fractions of total nitrogen and total sulphur.

SUBJECT V (A. M. N.).

Period.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
No preservative:								
1	....	4.59	0.50	1.82	5.41	....	....	....
2	80.54	4.60	.72	1.89	5.94	....	....	....
3	79.75	5.29	.47	2.07	6.70	....	....	....
Low preservative:								
4	82.33	4.38	.60	2.13	6.72	....	....	....
5	79.23	5.55	.56	2.13	7.10	67.65	8.82	23.52
6	83.16	4.86	.74	1.93	6.51	77.78	7.97	14.25
7	80.85	5.26	.39	2.05	6.35	72.92	10.08	17.00
8	80.89	4.82	.51	2.06	6.34	70.71	8.58	20.71
9	81.21	4.71	.33	2.05	6.55	70.54	8.26	21.20
10	81.60	4.14	.83	1.96	6.46	74.43	10.93	14.[illegible]4
11	83.04	4.12	.64	1.76	5.92	73.36	10.88	15.76
High preservative:								
12	81.96	4.29	.80	1.88	5.87	71.09	9.58	19.33
13	83.68	4.50	.61	1.67	5.38	74.56	7.54	17.90
14	82.19	4.68	.69	1.66	5.84	71.90	8.42	19.68
15	80.69	5.01	.55	2.00	6.70	70.74	9.33	19.92
No preservative:								
16	80.75	4.58	.89	1.94	6.84	66.28	9.39	24.33

SUBJECT VI (C. H. S.).

This subject is blessed with a remarkably flexible appetite, and was always ready for any kind or variation in the diet. He had a newspaper route for the early and late hours, and during part of the time performed some janitor work in the college buildings. A study of the following sheets shows an interesting regularity in the course of the urinary and fecal excretion, with no variations of any note to point to an effect of the benzoate The excretion of the neutral sulphur is here much more regular than with the other men, while for the ammonia, the uric acid, and the creatinine we have almost constant values throughout. The importance of such facts must not be overlooked, since any disturbances in the general metabolism would undoubtedly show in some of these constituents of the urine or feces. The total nitrogen and the urea outputs are apparently more regular through the whole season for this man than for the others, and it will be noticed that like Subject I he shows a little increase here from the fore period to the first preservative period, while for some of the others there is a decrease. As far as can be determined by the analyses of the excreta, it is evident that this man has remained in normal condition through the tests, and his metabolism has not been altered as an effect of the added preservative.

Daily means, Subject VI.

Determination.	Fore period.	Low preservative.	First high preservative.	Second high preservative.	After period.
	Grams.	*Grams.*	*Grams.*	*Grams.*	*Grams.*
Total nitrogen	12.04	12.33	13.75	13.00	12.35
Urea nitrogen	9.63	10.50	11.72	10.85	10.24
Uric acid nitrogen	.21	.21	.23	.21	.20
Ammonia nitrogen	.55	.52	.55	.54	.51
Creatinine nitrogen	.62	.62	.64	.65	.61
Purine nitrogen	.063	.06	.073	.07	.071
Total sulphur	....	.90	1.07	.97	.94
Total phosphorus	.83	.92	1.00	.91	.90
Indican, Fehling=100	17.00	17.00	15.00	13.00	13.00
Total ether extract in feces, grams	5.08	5.21	4.65	4.92	4.73
Ether extract as fraction of ingested fat, per cent	4.06	3.80	3.28	3.31	3.53
Fraction of excreted nitrogen in feces, per cent	15.6	14.6	13.3	11.5	16.0

Average daily composition of feces.

SUBJECT VI (C. H. S.).

Period.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.	Total nitrogen.	Total ether extract.
No preservative:	*Grams.*	*Grams.*	*Per cent.*	*Per cent.*	*Per cent.*	*Grams.*	*Grams.*
1	175	32.71	81.34	1.3	3.3	2.28	5.78
2	163	29.45	81.99	1.38	2.5	2.39	4.09
3	163	45.14	72.26	1.4	3.3	2.28	5.37
Low preservative:							
4	158	31.45	80.05	1.4	3.0	2.21	4.73
5	172	32.39	81.12	1.2	2.8	2.06	4.80
6	189	37.53	80.10	1.1	2.8	2.07	5.28
7	162	40.39	75.00	1.3	2.3	2.10	3.72
8	137	29.83	78.21	1.5	5.3	2.05	7.26
9	168	38.96	76.77	1.5	4.1	2.52	6.88
10	124	27.77	77.55	1.6	3.5	1.98	4.33
11	130	27.00	79.30	1.4	3.6	1.83	4.70
High preservative:							
12	158	31.06	80.34	1.4	2.2	2.21	3.49
13	166	38.53	76.83	1.2	3.5	2.00	5.82
14	134	26.34	80.36	1.3	2.9	1.74	3.89
15	138	30.76	77.73	1.2	4.3	1.66	5.94
No preservative:							
16	182	41.17	77.36	1.3	2.6	2.36	4.73
Mean for 16 periods	157	33.77	78.52	1.34	3.25	2.11	5.05

Percentage distribution of nitrogen and sulphur in urine: Average value for each period in fractions of total nitrogen and total sulphur.

SUBJECT VI (C. H. S.).

Period.	Urea nitrogen.	NH_3 nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.
No preservative:								
1	....	4.80	0.60	1.67	4.59	....	....	....
2	82.07	4.92	.61	1.87	5.53	....	....	....
3	82.58	3.99	.35	1.69	5.34	....	....	....
Low preservative:								
4	83.89	4.49	.61	1.81	5.59	....	....	....
5	83.99	4.84	.26	1.78	5.25	74.16	5.62	20.22
6	86.12	4.52	.61	1.66	5.16	79.83	6.67	13.50
7	84.45	4.16	.44	1.77	4.23	77.70	6.27	16.03
8	84.45	4.60	.40	1.79	4.87	77.78	6.98	15.24
9	84.14	3.70	.34	1.66	4.62	77.45	7.86	14.69
10	85.71	3.65	.63	1.63	4.76	76.84	6.59	16.57
11	85.68	4.07	.54	1.66	4.94	77.57	5.53	16.90
High preservative:								
12	85.25	3.99	.58	1.69	4.59	78.00	5.47	16.53
13	85.26	4.03	.47	1.65	4.63	78.15	5.56	16.29
14	83.77	4.28	.63	1.54	5.10	74.70	6.89	18.41
15	83.32	3.94	.45	1.62	4.90	74.85	6.39	18.76
No preservative:								
16	82.89	4.14	.58	1.59	4.90	74.62	6.84	18.54

MEANS OF FECES ANALYSES.

It may be a matter of some interest to have a summation of all the results from the feces tests for comparison, and such summation is given in tabular form. From this it may be easily seen just how far the period results depart from the general mean.

Average composition of feces of six men during 120 days.

Subject.	Moist weight.	Dry weight.	Water.	Nitrogen.	Ether extract.	Total nitrogen.	Total ether extract.
	Grams.	*Grams.*	*Per cent.*	*Per cent.*	*Per cent.*	*Grams.*	*Grams.*
I	178	33.50	83.42	1.40	2.70	2.49	4.81
II	140	37.32	71.98	1.78	3.93	2.37	5.31
III	234	40.93	82.36	1.17	2.32	2.74	5.43
IV	112	25.57	77.04	1.20	3.04	1.32	3.35
V	197	32.14	83.33	1.17	1.98	2.26	3.89
VI	157	33.77	78.52	1.34	3.25	2.11	5.05
Mean	168	33.87	79.44	1.34	2.87	2.22	4.64

HIPPURIC ACID.

Because of the laborious character of the work no effort was made to carry through complete series of determinations of hippuric acid. But from time to time analyses of composites were made with the object of observing the increased output of this acid with the increase in the benzoate administered, and to find, further, whether the benzoic acid is eliminated as such, or as hippuric acid wholly. With the second object in mind more attention was given to the purity of the final extracts than to their absolute amount. In the last weeks of the preservative administration the weights of hippuric acid recovered in pure form amounted to 1.5 grams, and in some few cases to nearly 2 grams daily. In the treatment with petroleum ether for the separation of benzoic acid essentially negative results were always obtained, from which it was evident that the whole of this acid had passed over into the combined form. That this is the normal condition is now generally admitted, and calls for no further discussion here.

NITROGEN AND FAT BALANCES.

Appended to the general urine and feces charts given in detail there are data concerning the nitrogen and fat balances for each period. The food charts, as given above, must be consulted to find the original figures from which the nitrogen and fat intake has been calculated. For purpose of ready comparison, however, it will be convenient to have all these figures in condensed tabular form. The next table presents such a condensation, the balances being calculated for the day instead of for the period, as above. It will be seen that the nitrogen balances are in most cases characteristically positive; the exceptions are so few as to have no special significance. The most marked negative balance is found in Subject No. IV, on account of the irregularities in a few meals, as referred to at the outset. For Subject No. VI we have a slight negative balance in the last period only, and for the others at earlier dates. Subjects Nos. IV and V have

small negative balances in the after period, but of trifling value. In Subject No. II a negative balance shows in the first fore period, the reason for which is not apparent.

The fat balances merely serve to show the abundant fat of the diet.

Nitrogen and fat balances.

Period.		Subject I.	Subject II.	Subject III.	Subject IV.	Subject V.	Subject VI.
No preservative:							
1	N	+ 0.22	− 1.84	+ 0.13	+ 4.46	+ 0.83	+ 1.84
	Fat	+101.7	+110.6	+149.9	+150.9	+122.8	+141.9
2	N	+ 1.71	+ 1.17	+ .48	− 3.21	+ .02	+ 1.04
	Fat	+108.1	+117.6	+143.6	+ 91.2	+ 98.5	+108.9
3	N	+ 2.29	+ .91	+ 1.53	− .58	+ .9	+ .78
	Fat	102.8	106.7	143.1	+ 93.7	+104.1	+107.1
Low preservative:							
4	N	+ 1.73	+ 1.64	+ 1.17	+ 1.69	− .1	+ 1.17
	Fat	+ 97.8	+107.2	+146.5	+110.2	+ 85.0	+106.1
5	N	+ 2.77	+ .18	+ 1.77	+ 1.82	+ 2.51	+ 2.12
	Fat	+106.6	+ 98.5	+152.9	+135.2	+107.2	+119.9
6	N	+ 3.36	+ 1.05	+ 1.81	+ 1.82	+ .65	+ 1.5
	Fat	+112.9	+124.7	+153.5	+142.4	+105.4	+118.9
7	N	+ 2.12	+ 2.07	+ 1.99	+ 1.24	+ 1.37	+ 2.07
	Fat	+112.3	+113.7	+160.1	+153.6	+111.5	+134.9
8	N	+ .54	+ 1.64	+ .8	+ 1.65	+ 2.3	+ 2.64
	Fat	+104.9	113.5	+166.6	+165.7	+107.7	+130.5
9	N	+ 2.52	+ 2.58	+ 2.95	+ 1.78	+ 2.06	+ 1.39
	Fat	....	....	....	....	....	....
10	N	+ 1.83	+ 1.56	+ 1.53	+ .99	+ 1.66	+ 1.68
	Fat	+110.8	+109.8	+156.3	+128.7	+165.8	+136.2
11	N	+ 2.23	+ 1.15	− .53	+ 1.66	+ 1.39	+ 1.65
	Fat	+125.6	+118.1	+157.8	+129.3	+118.5	+144.8
High preservative:							
12	N	+ .16	+ 1.36	+ 2.81	+ 2.13	+ 1.15	+ 2.36
	Fat	+112.6	+111.5	+165.9	+114.2	+ 98.7	+131.2
13	N	+ 2.78	− 1.25	+ 1.98	+ 1.69	+ 1.96	+ 1.95
	Fat	+116.9	+ 82.1	+164.5	+127.2	+126.9	+143.2
14	N	− .17	+ .38	+ 2.05	+ 1.41	− .32	+ 1.85
	Fat	+111.9	+ 97.5	+174.8	+174.5	+114.9	+151.8
15	N	+ 1.34	+ 2.57	+ 1.72	+ 3.03	+ 1.46	+ 1.87
	Fat	+126.8	+138.4	+169.5	+182.4	+120.7	+143.0
No preservative:							
16	N	+ .84	+ .85	+ .01	− .33	− .09	− .33
	Fat	+126.6	+128.9	+170.4	+170.3	+111.1	+129.2

In connection with the figures in the tables showing the consumption of food and the excretion of nitrogen two things further must be noted. The nitrogen elimination is naturally variable, but a comparison with the food charts given above will show that in general this output varies closely with the nitrogen consumption. The few exceptions to this rule do not fall in any one period of the investigation; it is therefore not possible to connect it with the presence of the benzoate in the food. The most marked of these exceptions occurs, in the case of Subject No. I, in the last preservative periods. The cause of this will be discussed under medical conditions.

UTILIZATION OF NITROGEN AND FAT.

A study of the utilization of nitrogen and fat is instructive. The figures given above, the tables of daily means, show that the percentage amounts of fat, or crude ether extract, properly, found in the feces are variable to a high degree, but can not be connected with the benzoate addition, since the maximum values occur for the different individuals in different periods. For Subject No. I the best utilization is in the after period and the worst in the fore period, while for the high-preservative periods the utilization is nearly the same as for the after period. For Subject No. II the best utilizations are found in the last high-preservative and the after period, and distinctly better than in the fore period and the other preservative periods. For Subject No. III the utilization is good throughout, but slightly more favorable in the first high-preservative period. In the case of Subject No. IV the results for the high-preservative periods and the after period are essentially the same and very favorable. A somewhat poorer utilization is found in the fore period and the low-preservative period, which show about the same result. In Subject No. V the poorest utilization is in the fore period and the best in the after period, with that for the second high-preservative period essentially the same as for the latter. For Subject No. VI the two high-preservative periods show the most favorable results, while the least favorable are for the fore-period average. In general, there is a tendency toward good utilization extending over into the after period, which is fairly distinct in most cases.

For the utilization of nitrogen we have two considerations; we may take the relation of the nitrogen of the feces to the nitrogen of the food, or the relation of the nitrogen of the feces to the total excreted nitrogen. In either case we fail to find any systematic connection between the benzoate and the feces nitrogen. This is true, however, that the percentage of the total nitrogen excreted in the feces is always greater in the after period than in the last high-preservative period. In most cases this last high-preservative period shows the best results in this regard, but not always. The full meaning of these relations can be seen only by comparing the food tables at the same time, but it appears evident that no definite relation with the benzoate exists throughout; the utilization of nitrogen is not lessened by the addition of the preservatives.

QUALITATIVE URINE TESTS.

In addition to the quantitative results for the urine, recited in the preceding pages, a number of special qualitative tests were regularly made. The tests for sugar, albumin, acetone, and glucoronic acid were throughout negative, and will not be tabulated. Tests

for aromatic oxyacids and for indolacetic acid were made twice a week for each subject, by the addition of Millon's reagent in the one case and of hydrochloric acid and potassium nitrite in the other to the ether extract of the urine, prepared in the usual way. From the depth of color obtained in each case the results are reported as "slight," "moderate," or "strong." It will be noticed that the data as tabulated in tables following vary in an irregular manner, and seem to show no sharp change with the increase of benzoate in the diet. One point only need be specially mentioned. In the earlier weeks of the investigation the indolacetic acid test was frequently negative in some of the men, to turn later to positive without the addition of nitrite. In all the later tests the addition of nitrite was required to complete the test. But the behavior is not general, and we have no corresponding change in the after period. It would be difficult, therefore, to connect the phenomena in any satisfactory way with the preservative.

SEDIMENTS FROM THE URINES.

Weekly examinations of the sediments from the urines, obtained by use of the centrifuge, were made for each man. The results are given in tabular form. No characteristic variations are apparent, and in general the crystals and organized forms found in the fore periods continue throughout the whole series of tests. This is particularly true of the hyalin casts, which are frequently found in the urine of two of the men, in small numbers. At one time such casts were usually described as pathological, but it is now known that their occurrence in normal urine is by no means rare. In the numbers found in these centrifuged urines there is nothing pathological, and in any event the frequency with which they occur is not increased as the administration of benzoate begins and continues. The pus cells found rather commonly throughout in two of the cases are doubtless due to chronic gonorrhea, contracted before going on the squad. They have no bearing on the results.

Qualitative urine examination.

[Systematic tests were made for albumin, sugar, and acetone. As these tests were uniformly negative, the results are not tabulated. The results of tests for aromatic oxyacids and indolacetic acid are given in the table below.]

Date.	Subject I (H. N. B.).		Subject II (W. W. C.).		Subject III (A. G.).		Subject IV (O. F. L.).		Subject V (A. M. N.).		Subject VI (C. H. S.).	
	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.
1908.												
July 2	Negative	Negative	Slight	Negative	Slight	Negative	Slight	Negative	Slight	Negative	Slight	Negative.
6	Slight cold, strong on heating.	Distinct with HCl only.	do	do	do	do	do	do	do	do	do	Do.
9	Strong cold.	Distinct HCl only.	do	do	do	do	do	Slight HCl only.	do	do	do	Slight HCl only
13	Slight	Faint HCl only.	do	Faint HCl only.	Negative	do	do	Negative	do	do	do	Negative.
16	do	Distinct HCl only.	do	Distinct HCl only.	do	do	do	do	do	do	do	Do.
20	do	do	do	Negative	Slight	do	do	Slight HCl only.	do	do	do	Do.
23	do	do	do	Marked HCl only.	do	HCl only	do	Negative	do	Slight	do	Slight HCl only
27	do	Slight HCl only.	do	Negative	do	do	do	Slight	do	do	do	Do.
30	do		do	Moderate	do	Slight	Negative	do	do	do	Negative	Slight.
Aug. 3	Moderate	Strong	do	Slight	do	Negative	do	do	do	do	Slight	Do.
6	do	do	do	do	Negative	Trace	do	do	do	Trace	do	Do.
10	Slight	Moderate	do	do	do	do	Slight	do	do	Negative	do	Do.
13	do	Slight	do	do	do	Slight	Negative	do	do	Slight	do	Do.
17	Negative	Trace	Negative	Moderate	Slight	do	do	do	do	Negative	do	Do.
20	do	Negative	do	Slight	Negative	do	do	do	Negative	Trace	do	Negative.
24	Moderate	Moderate	do	Negative	Slight	do	Slight	do	do	Negative	Negative	Do.
27	do	do	Slight	Slight	do	Slight	do	do	Slight	Trace	Trace	Trace.
31	Negative	Slight	Negative	Moderate	do	do	do	Moderate	do	Slight	Negative	Do.
Sept. 3	do	Trace	Slight	Slight	Moderate	do	do	Slight	do	do	Slight	Slight.
8	Strong	Strong	Moderate	do	Slight	do	do	Moderate	do	Moderate	do	Do.
11	Slight	Slight	Slight	Moderate	Moderate	do	Trace	Slight	do	Trace	do	Moderate.
15	Strong	Strong	do	Slight	Slight	do	do	do	Moderate	Slight	do	Slight.
18	do	do	do	do	do	do	Negative	do	Trace	do	do	Trace.
22	Moderate	Moderate	do	Moderate	do	do	Trace	do	Moderate	do	do	Do.
25	Strong	Strong	do	Slight	Moderate	do	do	do	Trace	do	do	Slight.
29	Intense	do	do	do	do	do	Negative	do	Slight	do	Moderate	Do.

Qualitative urine examination—Continued.

Late.	Subject I (H. N. B.).		Subject H (W. W. C.)		Subject III (A. G.).		Subject IV (O. F. L.).		Subject V (A. M. N.).		Subject VI (C. H. S.).	
	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acid.	Aromatic oxyacids.	Indolacetic acids.
1908. Oct. 2	Slight	Moderate	Trace	Trace	Moderate	Slight	Slight	Moderate	Slight	Trace	Slight	Slight.
6	do	do	Slight	Slight	Slight	do	Negative	do	do	Slight	do	Moderate.
9	Intense	Strong	Trace	do	Moderate	do	Trace	Slight	do	Trace	Trace	Slight.
13	do	Intense	do	do	Strong	do	Trace	do	do	Slight	Slight	Do.
16	Strong	Strong	Negative.	do	Moderate	do	Negative	do	Trace	Trace	Trace	Trace.
20	Moderate	Moderate	Slight	do	Slight	do	Trace	Moderate	Slight	Slight	Slight	Slight.
23	Strong	Strong	Trace	do	do	do	do	Slight	do	Trace	do	Do.
27	do	do	Slight	do	do	do	Negative	do	do	Slight	do	Do.
30	do	do	do	do								

Weekly examination of urine sediments.

Date.	Subject I (H. N. B.).	Subject II (W. W. C.).	Subject III (A. G.).	Subject IV (O. F. L.).	Subject V (A. M. N.).	Subject VI (C. H. S.).
1908. July 3	Many mucous shreds; a few white blood corpuscles; amorphous urates.	Many pus cells; many clumps of epithelial cells.	Many mucous shreds; few clumps of pus cells; 1 hyaline cast; many spermatazoa; much epithelium.	Epithelium only in small amount.	Several hyaline casts; some mucous shreds; many oxalates.	3 to 6 pus cells per field; few epithelial cells.
July 10	Mucous shreds; calcium oxalates; amorphous urates.	Many pus cells, 10 to 15 per high-power field; many clumps of and single epithelial cells; amorphous urates.	Many mucous shreds; much epithelium; 1 slightly granular cast.	Very few mucous shreds; some epithelium.	Many mucous shreds; 1 slightly granular cast; several hyaline casts; many amorphous urates.	Few pus cells; some epithelium; many bacteria; amorphous urates.
July 17	Many mucous shreds; many hyaline and granular (fine) casts. (N. B.—This observation controlled by Professor Long.)	Many pus cells; much epithelium.	Many oxalates; some mucous shreds; some epithelium.	1 hyaline cast; some epithelium; amorphous urates.	Many mucous shreds; several hyaline casts; some uric acid crystals.	Many oxalates; some pus cells; few mucous shreds; bacteria; few amorphous urates.
July 24	Profusion of mucous shreds; many calcium phosphates; calcium oxalates; amorphous urates; some uric acid crystals.	Many pus cells, 6 to 8 per high-power field; few calcium phosphate; some bacteria.	Many mucous shreds; 1 hyaline cast; calcium oxalate crystals.	Few epithelial cells; few calcium oxalates.	Several hyaline casts; many mucous shreds; calcium oxalate crystals.	Few clumps of pus cells; several single white blood corpuscles; many mucous shreds; considerable epithelium.

July 31	Many mucous shreds; many calcium oxalates; amorphous urates; some epithelium.	Many pus cells; some mucous shreds; some calcium oxalates and epithelium.	Many mucous shreds; 1 hyaline cast; many calcium oxalates; some pus cells.	Amorphous urates; some epithelium; some mucous shreds.	Field full of mucous shreds and calcium oxalates; 1 hyaline cast.	5 to 6 pus cells per field; some mucous shreds; some oxalates; some epithelium.
Aug. 7	Many calcium phosphates; field full of mucous shreds; some calcium oxalates; few uric acid; some amorphous urates; some epithelium.	Many pus cells, single and in clumps; some epithelium; many mucous shreds; amorphous urates.	Some pus cells; many spermatazoa; 1 hyaline cast; many mucous shreds; some epithelium; amorphous urates.	Many spermatazoa; some mucous shreds; some epithelium; a few uric acid crystals.	1 hyaline cast; very many calcium oxalates; field full of mucous shreds; some uric acid.	Some pus cells in clumps and free; some epithelium; many calcium oxalates.
Aug. 14	Many mucous shreds; many calcium phosphate crystals; some calcium oxalates; 1 finely granular cast; some epithelium; a few uric acid crystals.	Many pus cells; some mucous shreds; some epithelial cells; a few uric acid crystals.	Some mucous shreds; some epithelium; some calcium oxalates; a few spermatazoa; 5 to 6 pus cells per high-power field.	Many spermatazoa; some mucous shreds; some epithelium; a few uric acid crystals.	Several hyaline casts; many calcium oxalates; many mucous shreds; some epithelium.	Good many pus cells; good deal of epithelial cells; some mucous shreds.
Aug. 21	Many mucous shreds; many calcium phosphate crystals; some calcium oxalates; a few white blood corpuscles; a few spermatazoa; 1 hyaline cast; some epithelium.	Many pus cells; some mucous shreds; here and there an epithelial cell; a few uric acid deposits.	Many calcium oxalates; a few spermatazoa; a few pus cells; some epithelium; many mucous shreds.	Good many spermatazoa; many epithelial cells; a few uric acid crystals.	Several hyaline casts; many mucous shreds; some epithelium; many calcium oxalates.	Good many pus cells; good many epithelial cells in clumps and singly; many mucous shreds.
Aug. 28	Many mucous shreds; many calcium phosphates; many calcium oxalates; some urates; a few hippuric acid crystals(?); a few white blood corpuscles.	Field full of pus cells, singly and in small masses; good deal of epithelium; many mucous shreds; some amorphous urates.	Good many mucous shreds; some epithelium; some calcium oxalates; 1 hyaline cast (?); here and there a white blood corpuscle; amorphous urates.	Some epithelial cells; few mucous shreds; amorphous urates.	Field full of calcium oxalates and mucous shreds; some epithelial cells.	Good deal of epithelium; some pus cells; a few calcium oxalates.
Sept. 4	Many calcium phosphate crystals; some calcium oxalates; many mucous shreds; little epithelium.	Many pus cells; some mucous shreds; some amorphous urates.	Field full of calcium oxalates; some epithelial cells.	Few calcium oxalate crystals; few amorphous urates; some epithelium; here and there a white blood corpuscle.	Many calcium oxalates; many mucous shreds; several hyaline casts; few hippuric acid crystals(?).	Good many pus cells, in clumps and singly; good deal of epithelium; some calcium oxalates; some mucous shreds.
Sept. 11	Many calcium phosphates; many calcium oxalates; many mucous shreds; some epithelium; 1 hyaline cast.	Many pus cells; some epithelium; some mucous shreds; 1 hyaline cast.	Some calcium oxalates; a few epithelial cells; a few white blood corpuscles; good many mucous shreds; 2 hyaline casts.	Good deal of epithelium; some uric acid crystals; many mucous shreds.	Field full of mucous shreds; many calcium oxalates; 2 hyaline casts.	Good deal of epithelial cells; good many pus cells, 2 to 4 per high-power field.
Sept. 18	Field full of mucous shreds and calcium phosphate crystals; some calcium oxalates; few epithelial cells.	Many pus cells; many mucous shreds; some epithelium.	Many mucous shreds; some calcium oxalates; 1 hyaline cast.	Some mucous shreds; good deal of epithelium; some amorphous urates	Many mucous shreds; many calcium oxalates; several hyaline casts; here and there a white blood corpuscle.	2 to 3 pus cells per high-power field; good deal of epithelium
Sept. 25	Many mucous shreds; 1 granular cast; few epithelial cells; few calcium phosphate crystals.	Many pus cells; amorphous urates; some clumps of epithelium; some mucous shreds.	Few oxalates; many mucous shreds; some epithelium.	Some epithelium; some mucous shreds; few uric acid crystals; amorphous urates.	Many oxalates; several hyaline casts; good many mucous shreds; good many epithelial cells.	1 to 2 pus cells per high-power field; some calcium oxalates; some epithelium.

Weekly examination of urine sediments—Continued.

Date.	Subject I (H. N. B.).	Subject II (W. W. C.).	Subject III (A. G.).	Subject IV (O. F. L.).	Subject V (A. M. N.).	Subject VI (C. H. S.).
1908. Oct. 2	Many mucous shreds; some calcium oxalates; hippuric acid (?); some calcium phosphates; some epithelium; amorphous urates.	Many pus cells; many epithelial cells; some mucous shreds.	1 hyaline cast; good many calcium oxalates; some mucous shreds; a little epithelium; here and there a white blood corpuscle.	Some epithelium; some amorphous urates; some mucous shreds.	Field full of mucous shreds and oxalates; 1 hyaline cast; some epithelium.	Good deal of epithelium; some mucous shreds; few calcium oxalates; 1 or 2 white blood corpuscles to high-power field.
Oct. 9	Many mucous shreds; few calcium oxalates; few amorphous urates; little epithelium.	Many pus cells; good deal epithelium; few mucous shreds.	Many mucous shreds; a few white blood corpuscles; some oxalates; 2 hyaline casts.	Few epithelial cells; few mucous shreds; few calcium oxalates.	Many mucous shreds; many calcium oxalates; many spermatazoa; few epithelial cells.	2 to 3 pus cells per field; good many epithelial cells; few amorphous urates; few calcium oxalates.
Oct. 16	Many calcium oxalates; few mucous shreds; few epithelial cells; some amorphous urates.	Many pus cells; good deal epithelium; many mucous shreds; many amorphous urates; many oxalates.	1 hyaline cast; many mucous shreds; few oxalates; some amorphous urates; occasional white blood corpuscle.	Many oxalates; good many mucous shreds; few oxalates; few urates; few epithelial cells.	Very many mucous shreds; good many oxalates; few epithelial cells; few urates; 1 hyaline cast.	Good many uric acid crystals; 3 to 4 pus cells per high-power field; some epithelium; few mucous shreds.
Oct. 23	Considerable oxalates; few mucous shreds; amorphous urates; few calcium phosphates; some epithelial cells.	Many pus cells; few oxalates; some epithelium; some urates; some mucous shreds.	Few oxalates; some epithelium; some mucous shreds; few uric acid crystals; here and there a white blood corpuscle.	Mass of spermatazoa; they are short and very small.	Several hyaline casts; many mucous shreds; many calcium oxalates; few epithelial cells.	1 hyaline cast; many mucous shreds; good deal of epithelium; 3 to 4 pus cells per high-power field.
Oct. 30	Many calcium oxalates; some amorphous urates; few mucous shreds.	Many pus cells; considerable epithelium; some calcium oxalates; some mucous shreds; and a few large masses of mucous (Tripperfaden?).	1 hyaline cast; good many oxalates; 1 or 2 white blood corpuscles found; some epithelium; some mucous shreds.	Some mucous shreds; many spermatazoa; here and there a white blood corpuscle; few calcium oxalates.	Many mucous shreds; some calcium oxalates; some epithelial cells; 1 hyaline cast(?).	Some pus cells; some epithelium; a few calcium oxalates; a few calcium phosphate or hippuric acid crystals(?).

EXAMINATION OF THE FECES.

The above tables present all of the routine examinations carried out on the urine. We have next to consider work on the feces, which may have a bearing on the question of the possible effects of sodium benzoate on the metabolism. This work is presented in two sets of tables. The first set to follow give the results of general tests and observations, covering questions of color, reaction, consistence, odor, specific gravity as shown by rising or sinking in water, the presence of mucus, the presence of indol, the presence of biliary derivatives reacting with mercuric chloride, and finally the amount of gas liberated by bacteria present from glucose tubes and from bouillon tubes. These data are all presented in very brief form, and, in general, it will be noticed that no definite changes of any kind occur which may be associated with the benzoate added to the food. The general character of the feces seems independent of any such influence.

Following these general tables we have a more extensive series showing the results of the Gram-stain tests on the feces direct, on the sediment from the glucose tubes, and on the sediment from the bouillon tubes. As the results of these tests are rather fully given they speak for themselves, and need no additional explanation at this point. The general conclusion to be drawn from them is that the administration of benzoate in the large and small doses given in our tests has no discernible effect on the bacterial flora. While great variations in the pictures may be noticed, they occur apparently at random in the feces of the different individuals, and any sufficient evidence to connect them with the dosage appears to be quite lacking.

General character of feces.

SUBJECT I (H. N. B.).

Date.	Color.	Consistency.	Odor.	Specific gravity.	Mucus.	Reaction.	Indol test.	$HgCl_2$ reaction.	Gas in glucose tube.	Gas in bouillon tube.
1908.									*Per cent.*	
July 2	Brown	Pasty	Foul	Sinks	None	Acid	Slight	Slight	10.0	Trace.
6	Yellow	do	do	Floats	do	do	do	Fair	15.0	Do.
9	Light	Soft	do	do	do	Slightly acid	do	do	40.0	None.
13	Dark	Pasty	Aromatic	Sinks	do	Acid	do	do	30.0	Trace.
16	Brown	do	Fecal	do	do	do	Trace	Slight	40.0	None.
20	Dark	Stiff	Acrid	do	do	do	Slight	Negative	20.0	Do.
23	Yellow	Hard	Fecal	do	do	Slightly acid	Negative	Fair	33.0	Do.
27	Light	Pasty	Foul	do	do	Acid	Trace	Slight	33.0	Do.
30	Yellow	Soft	Fecal	Floats	do	do	do	Trace	20.0	Do.
Aug. 3	Brown	Pasty	Sharp	Sinks	do	do	Slight	Slight	5.0	Do.
6	Yellow	do	Acrid	do	do	do	do	Strong	25.0	Do.
10	Brown	do	Fecal	do	do	do	Trace	Fair	20.0	Do.
14	Dark	Soft	Aromatic	do	do	do	do	Slight	20.0	Do.
17	do	do	Faint	do	do	do	do	do	20.0	Do.
20	do	do	do	do	Trace	do	do	do	25.0	Do.
24	Light	do	Acrid	Floats	do	do	Slight	Fair	15.0	Do.
27	Yellow	Hard	do	Sinks	None	do	do	do	20.0	Do.
31	Dark	Pasty	Fecal	Floats	Trace	Neutral	Trace	do	25.0	Do.
Sept. 3	Dark green	do	do	Sinks	None	Acid	do	Negative	33.0	Do.
8	Brown	do	do	do	do	do	do	Trace	15.0	Do.
11	Light	do	do	Floats	do	do	Fair	Strong	20.0	Do.
15	Dark	Hard	do	do	do	do	Slight	Fair	10.0	Trace.
18	Yellow	Pasty	do	Sinks	do	do	Trace	Trace	25.0	None.
22	Dark green	Soft	Aromatic	do	do	do	Slight	Fair	40.0	Do.
25	Brown	do	Putrid	Floats	do	do	do	do	33.0	Do.
29	do	Liquid	Fecal	Sinks	do	Neutral	do	do	20.0	Do.
Oct. 2	Dark	Pasty	do	Floats	do	Acid	do	Negative	33.0	Do.
6	do	Hard	do	do	do	do	Trace	Fair	33.0	Do.
9	do	Soft	do	do	do	do	Slight	do	25.0	Do.
13	Yellow	do	Aromatic	Floats	do	do	do	do	25.0	Do.
16	Dark	Pasty	Foul	Sinks	do	do	Trace	do	25.0	Do.
20	Light	Soft	Aromatic	Floats	do	do	do	do	30.0	Do.
23	do	do	Fecal	do	do	do	Slight	Strong	15.0	Do.
27	Dark	do	Aromatic	do	do	do	Trace	Trace	15.0	Do.
30	Brown	do	do	Sinks	do	do	Negative	Slight	30.0	Do.

SUBJECT II (W. W. C.).

1908.									*Per cent.*	
July 2	Dark brown	Pasty	Foul	Sinks	None	Acid	Slight	Slight	20.0	Trace.
6	Dark yellow	Semisolid	do	do	do	do	Fair	Fair	60.0	Do.
9	do	do	Very bad	Floats	do	do	Trace	Trace	60.0	5 per cent.
13	Light brown	Hard	Fecal	Sinks	do	Alkaline	do	Negative	15.0	None.
16	Dark brown	Semisolid	Very bad	do	do	Neutral	do	Trace	10.0	Do.
20	Dark yellow	do	Fecal	do	do	Acid	do	Slight trace	25.0	Do.
23	Brown	do	do	do	do	do	Slight	Trace	33.0	Do.
27	Dark brown	Hard	do	Floats	do	do	do	do	25.0	Do.
30	Light brown	Semisolid	do	Sinks	do	do	Trace	Negative	33.0	Trace.
Aug. 3	Greenish yellow.	do	Acrid	do	do	do	Negative	do	5.0	Do.
6	Dark brown	do	do	do	do	do	do	Trace	33.0	None.
11	do	Hard	Fecal	do	do	do	do	Negative	20.0	Do.
13	do	Semisolid	Acrid	do	do	do	Trace	Slight trace	10.0	Do.
17	Dark yellow	Hard	Fecal	do	do	do	do	Fair	33.0	Do.
20	do	do	do	do	do	do	Fair	Negative	25.0	Do.
24	Dark brown	Semisolid	Aromatic	Floats	do	do	Trace	do	25.0	Do.
27	do	do	Fecal	Sinks	do	do	Slight	do	20.0	Do.
31	Dark yellow	Hard	Acrid	do	do	do	Trace	do	10.0	Do.
Sept. 3	Dark brown	do	Aromatic	do	do	do	do	do	20.0	Do.
8	Brown	Semisolid	Acrid	do	do	do	do	do	25.0	Do.
11	Dark brown	do	Fecal	do	do	do	do	do	20.0	Do.
15	Dark green	Soft	Aromatic	Floats	do	do	Fair	Fair	40.0	Do.
18	Dark brown	Hard	Acrid	Sinks	do	do	do	Trace	15.0	Do.
22	do	Very hard	Fecal	Floats	do	do	Slight	do	50.0	Do.
26	do	Semisolid	Acrid	Sinks	do	do	do	Negative	33.0	Do.
30	do	do	Aromatic	do	do	do	Trace	Trace	15.0	Do.
Oct. 2	Light brown	Soft	Acrid	do	do	do	Negative	Negative	15.0	Trace.
6	Dark brown	Hard	Fecal	do	do	do	Trace	Trace	20.0	Do.
9	Black	Semisolid	Aromatic	do	do	do	do	Negative	40.0	Do.
14	Dark brown	do	Fecal	do	do	do	Negative	do	40.0	None.
16	do	Hard	do	do	do	do	do	do	30.0	Do.
20	do	Semisolid	Aromatic	do	do	Neutral	Slight	Trace	25.0	Do.
23	do	Hard	Fecal	do	do	Acid	Trace	Negative	15.0	Do.
27	do	Semisolid	Aromatic	do	do	do	Slight	do	20.0	Trace.
30	do	Hard	do	Floats	do	do	Trace	Slight	40.0	None.

General character of feces—Continued.

SUBJECT III (W. G.).

Date.	Color.	Consistency.	Odor.	Specific gravity.	Mucus.	Reaction.	Indol test.	$HgCl_2$ reaction.	Gas in glucose tube.	Gas in bouillon tube.
1908.									*Per cent.*	
July 3	Yellow	Soft	Aromatic	Sinks	None	Acid	Fair	Slight	20.0	None.
7	Light brown	do	do	do	do	do	do	do	50.0	Trace.
10	do	do	Acrid fecal	Floats	do	do	Slight	do	25.0	Do.
14	Yellow	Very soft	do	do	do	do	Strong	do	33.3	None.
17	Light brown	Soft	Fecal	Sinks	do	do	Fair	Fair	20.0	Do.
21	do	do	do	Floats	do	Slightly acid	do	do	10.0	Do.
24	do	do	do	do	do	Acid	Strong	Slight	33.3	Do.
28	Yellow	do	Acrid fecal	do	do	do	Fair	do	25.0	Do.
31	do	do	do	Sinks	do	do	do	Fair		
Aug. 4	Greenish brown	do	Acrid foul	do	do	do	Slight	do	25.0	Do.
7	Light brown	do	Very acrid fecal.	do	do	do	do	do	20.0	Do.
11	Greenish brown	Very soft	Acrid fecal	do	do	do	Fair	Slight	15.0	Do.
14	Brown	Semisolid	do	do	Trace	do	Slight	do	10.0	Do.
18	Dark brown	Soft	do	Floats	None	do	do	Fair	30.0	Do.
21	Dark yellow	Very soft	do	Sinks	do	do	do	do	25.0	Do.
25	Dark greenish brown.	Soft	Putrid	do	do	do	do	Strong	20.0	Do.
28	Dark brown	Very soft	Fecal	do	do	do	Fair	Fair	33.3	Do.
Sept. 1	Dark greenish	Soft	Aromatic	do	do	Slightly acid	Slight	Negative	10.0	Do.
4	Dark yellow	do	Foul fecal	do	do	Acid	Fair	Slight	30.0	Do.
9	Dark brown	do	Acrid	Floats	do	do	do	Negative	33.3	Do.
12, 13	do	do	Fecal	Sinks	do	do	Slight	do	15.0	Do.
16	Brown	Semisolid	do	do	do	do	do	Fair	40.0	Do.
19, 20	Yellow	Very soft	Acrid	do	do	do	do	Slight	50.0	Do.
23	Dark greenish	do	do	do	do	do	Fair	do	33.3	Do.
26, 27	Dark brown	Soft	Fecal	do	do	do	Slight	Trace	25.0	Do.
30	Yellow	do	do	do	do	do	do	Slight	25.0	Do.
Oct. 3, 4	do	do	do	do	do	do	do	do	40.0	Do.
7	Light brown	do	Acrid fecal	do	do	do	Negative	Negative	25.0	Trace.
10, 11	Dark yellow	do	Fecal	do	do	do	Slight	Slight	50.0	None.
14	Dark brown	do	Fecal foul	do	do	do	do	do	40.0	Do.
17, 18	Yellow	Very soft	Putrid	Floats	do	do	do	do	50.0	Do.
21	Dark brown	Soft	Acrid fecal	Sinks	do	do	Fair	do	40.0	Do.
24, 25	Dark green	Liquid	Putrid	Floats	do	do	Slight	do	40.0	Do.
28	Light brown	Soft	Acrid fecal	Sinks	Trace	do	do	do	40.0	Do.

SUBJECT IV (O. F. L.).

1908.									*Per cent.*	
July 7	Light brown	Soft	Fecal	Sinks	None	Alkaline	Slight	Fair	25.0	Trace.
10	Dark brown	Semisolid	do	do	do	Neutral	do	Slight	50.0	Do.
14	Brown	do	do	do	do	Acid	do	do	15.0	Do.
17	Yellow	do	do	Floats	do	do	do	Strong	30.0	None.
21, 22	Reddish brown	do	do	Sinks	do	Neutral	do	do	25.0	Do.
24	Yellow	do	Acrid fecal	do	do	Acid	do	Fair	33.3	Do.
28	Dark brown	Hard	Fecal	do	do	Neutral	Negative	Slight	40.0	Trace.
31	Brown	Semisolid	do	do	do	Acid	Slight	do	15.0	None.
Aug. 4	do	Hard	do	do	do	do	do	do	15.0	Do.
7	Yellow	Semisolid	do	do	do	Neutral	Trace	Fair	25.0	Do.
11	Greenish brown	do	do	do	do	do	Negative	do	25.0	Do.
14	Light brown	Hard	Foul fecal	do	do	Acid	do	Slight	15.0	Do.
18	do	do	Fecal	do	do	Neutral	do	do	20.0	Do.
21	Yellow	do	do	do	do	Acid	do	Strong	25.0	Do.
25	Dark brown	Semisolid	Aromatic	do	do	do	Trace	do	30.0	Trace.
28	Yellow	Hard	Fecal	do	do	Alkaline	Negative	Fair	25.0	None.
Sept. 1	Dark greenish	Semisolid	do	do	do	Acid	do	Slight	30.0	Do.
4	Black	do	do	do	do	do	Trace	Strong	12.5	Do.
9	Dark brown	Hard	do	do	do	do	Slight	Slight	20.0	Do.
13	Light brown	do	do	do	do	Neutral	Fair	do	20.0	Do.
16	Greenish brown	Semisolid	do	do	do	do	Negative	Strong	10.0	Trace.
20	Light brown	do	do	do	do	Acid	do	Fair	50.0	None.
23	Dark brown	do	do	do	do	do	do	do	33.3	Do.
27	Black	do	do	do	do	do	do	Slight	33.3	Do.
30	Greenish brown	do	do	do	do	Neutral	do	Fair	20.0	Do.
Oct. 4	Dark yellow	Soft	Almost odorless.	do	do	do	do	do	33.3	Do.
7	Greenish	Semisolid	Aromatic	do	do	Acid	do	Slight	25.0	Do.
11	Yellow	Soft	Fecal	do	do	Alkaline	do	Strong	25.0	Do.
14	Greenish	Semisolid	do	do	do	Acid	Trace	Fair	25.0	Do.
18	Dark brown	do	Foul fecal	do	do	Neutral	Negative	Slight	50.0	Do.
22	Black	Soft	Fecal	do	Trace	Acid	Trace	Fair	33.3	Do.
25	Greenish black	Semisolid	do	do	Some	Neutral	Negative	Slight	33.3	Do.
28	Dark	Soft	Aromatic	Floats	None	Alkaline	do	Strong	33.3	Do.

General character of feces—Continued.

SUBJECT V (A. M. N.).

Date.	Color.	Consistency.	Odor.	Specific gravity.	Mucus.	Reaction.	Indol test.	$HgCl_2$ reaction.	Gas in glucose tube.	Gas in bouillon tube.
1908.									*Per cent.*	
July 5	Light yellow	Very soft	Foul	Sinks	None	Acid	Fair	Slight	25.0	None.
8	Yellow	do	Fecal	do	do	do	Strong	do	60.0	Trace.
12	Light brown	Semisolid	Foul	do	do	Alkaline	Slight	Strong	40.0	None.
15	do	Very soft	Acrid pungent	Floats	do	Acid	Strong	Fair	50.0	Do.
19	Greenish brown	Liquid	Putrid	Part floats	do	Alkaline	Slight	Slight	33.3	Do.
22	Light brown	Semisolid	Acrid fecal	Floats	do	Acid	do	do	25.0	Do.
26	Brown	do	do	Sinks	do	Neutral	do	do	10.0	Do.
29	Light brown	Liquid	Acrid	do	do	Acid	Fair	Fair	25.0	Do.
Aug. 2	do	Soft	Fecal	do	do	do	Slight	do	20.0	Trace.
5	Yellow	Very soft	do	Floats	do	do	do	Slight	40.0	None.
9	Light brown	Semisolid	do	Sinks	do	do	do	do	25.0	Do.
12	Brown	Hard	Putrid	do	Some	do	do	do	15.0	Do.
16	Dark brown	Very soft	Pungent	do	None	do	Fair	do	33.3	Do.
19	Yellow	do	Foul	do	do	do	do	Strong	25.0	Do.
23	do	do	Acrid fecal	do	do	do	do	Fair	20.0	Do.
26	Dark yellow	Soft	Fecal	do	Trace	do	do	do	20.0	Do.
30	Dark brown	do	Foul fecal	do	None	do	do	Strong	20.0	Do.
Sept. 2	Yellow	Liquid	Fecal	do	Trace	do	do	Slight	25.0	Do.
7	Brown	Semisolid	Acrid fecal	do	None	do	do	Fair	20.0	Do.
10	Yellowish	do	Acrid	Floats	do	do	do	Strong	15.0	Do.
14	Light brown	do	Acrid fecal	Sinks	do	do	Slight	Fair	20.0	Do.
17	Yellow	Soft	Fecal	do	do	do	do	Strong	5.0	Do.
21	do	Semisolid	Aromatic	Floats	Some	do	Fair	Slight	33.3	Do.
24	Dark brown	do	Fecal	do	None	do	Slight	Fair	35.0	Do.
28	Reddish brown	do	Acrid fecal	Sinks	do	do	Fair	do	40.0	Do.
Oct. 1	Dark brown	do	Aromatic	do	do	do	Slight	do	15.0	Do.
5	do	Liquid	Acrid fecal	do	do	do	Fair	do	30.0	Do.
8	do	do	Fecal	do	do	do	Slight	Slight	20.0	Do.
12	Light brown	do	Acrid foul	do	do	do	do	Strong	20.0	Do.
15	do	Soft	Fecal	do	do	do	do	do	25.0	Do.
19	Yellow	Liquid	Acrid foul	Floats and sinks.	Some	do	do	do	20.0	Do.
22	Dark yellow	Soft	Acrid fecal	Sinks	None	do	do	do	30.0	Do.
26	Light brown	Very soft	Aromatic	do	do	do	do	Fair	20.0	Do.
29	Brown	Semisolid	Fecal	do	do	do	do	Strong	40.0	Do.

SUBJECT VI (C. H. S.).

1908.										*Per cent.*
July 5	Dark brown	Semisolid	Foul	Sinks	None	Acid	Strong	Fair	25.0	Trace.
8	Light brown	do	Fecal	do	do	do	Slight	Slight	40.0	Do.
12	Dark brown	do	Foul	do	do	do	Fair	do	20.0	None.
15	Light brown	Very soft	Acrid pungent	Floats	do	do	Strong	Fair	50.0	Do.
19	Dark greenish	Semisolid	Foul	Sinks	do	do	Slight	Negative	25.0	2 to 4 per cent.
22	Brown	do	Acrid fecal	do	do	do	Fair	Slight	40.0	None.
26	Greenish brown	Soft	Acrid foul	do	do	do	Slight	Negative	20.0	Do.
29	Light brown	Semisolid	do	do	do	do	do	do	40.0	Do.
Aug. 2	Dark brown	do	Acrid fecal	do	do	do	Fair	Slight	25.0	Trace.
5	do	do	do	do	do	do	Slight	do	30.0	None.
9	do	do	Aromatic	do	do	do	do	do	20.0	Do.
12	Yellow	Very soft	Putrid	do	do	do	do	do	20.0	Do.
16	Dark brown	Semisolid	Fecal acrid	do	Trace	do	do	do	25.0	Do.
19	do	do	Fecal	do	None	do	do	do	15.0	Do.
23	do	do	Acrid fecal	do	do	do	do	Fair	33.3	Do.
26	Yellow	Soft	Strong fecal	do	do	do	Fair	do	20.0	Do.
30	Dark yellow	Semisolid	Fecal acrid	do	do	do	do	do	10.0	Do.
Sept. 2	Dark brown	Hard	Acrid fecal	do	do	Alkaline	Slight	Slight	33.3	Do.
7	Brown	Semisolid	Acrid	do	do	Acid	Fair	do	20.0	Do.
10	Dark brown	do	Acrid fecal	do	do	do	do	do	33.3	Trace.
14	Brown	do	Acrid	do	do	do	Slight	do	33.3	None.
17	Dark greenish	do	Fecal	do	do	do	do	do	25.0	Do.
21	Dark brown	do	Acrid	do	do	do	do	do	25.0	Do.
24	do	Soft	Acrid fecal	do	do	do	do	do	30.0	Do.
28	do	Semisolid	do	do	do	do	do	do	20.0	Do.
Oct. 1	Black	do	Fecal foul	do	do	do	do	Fair	33.3	Do.
5	Dark brown	Soft	Acrid fecal	do	do	do	do	Slight	25.0	Trace.
8	Light brown	do	do	do	do	do	Trace	Fair	35.0	Do.
12	do	do	Aromatic	do	do	do	Negative	Slight	40.0	Do.
15	Dark brown	do	Foul	do	do	do	Slight	do	30.0	None.
19	Black	do	Acrid foul	do	do	do	do	do	40.0	Do.
22	Brown	Semisolid	Fecal	do	do	do	do	Trace	33.3	Do.
26	Dark brown	Soft	Sweetish	do	do	do	Trace	Slight	30.0	Do.
29	Light brown	do	Sour fecal	do	do	do	Slight	do	25.0	Do.

Results of Gram-stain tests on feces.

SUBJECT I (H. N. B.).

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 2	Gram negative predominate. These are colon type and some rather long threads. Positive: Good many medium-sized diplococci, some large coccal bodies; some large bacilli of bacillus aerogenes capsulatus type, but shorter, some bacilli of colon morphology; some short thick bacilli with central spores (*subtilis?*); here and there slender curved bacilli with pointed ends.	Very few Gram negative. These of colon type. Positive: Majority are diplococci, some of which are in short chains; some bacilli of colon morphology; some very long slender bacilli in chains.	Very few Gram negative. Positive: Very many of *Bacillus subtilis* type with central spores; many of colon morphology, and some of same shape but longer; some very long slender bacilli; here and there some free spores.
July 6	Gram negative predominate. These are of colon type and some bacilli much longer. Positive: Many bacilli of colon morphology; good many thick bacilli of medium length and of aerogenes length or longer; few bacilli slightly longer than colon bacillus, slightly bent and pointed at ends; good many large coccal and diplococcal bodies; few medium-sized diplococci.	Practically gram positive field. Majority are diplococci in chains and singly; few bacilli of colon morphology.	Almost pure culture of gram positive bacilli of the morphology of colon, except longer. A few short stout bacilli. A few bacilli of subtilis type, with central spores. Here and there some free spores.
July 9	Gram positive and negative about equal. Positive: Good many large coccal and diplococcal bodies; many medium-sized diplococci; some colon-like bacilli; good many slender, rather long bacilli; here and there a bacillus of subtilis type with central spore.	Practically Gram positive field: Many diplococci in chains and singly; many bacilli of about aerogenes capsulatus type, and some much shorter and some longer than these.	Almost exclusively gram positive: Almost pure culture of diplococci in chains and scattered; some bacilli of colon morphology and some longer than colon, but of same thickness.
July 13	Gram negative predominate. These are of colon type, some longer, some spirochete-like bodies, and some long, slender threads. Positive: Good many large coccal bodies; many medium-sized diplococci; here and there some bacilli of about aerogenes capsulatus type; many bacilli of colon morphology, and some longer and more slender than these.	Gram positive almost exclusively: Abundant diplococci, many in chains; few short bacilli of colon morphology.	Gram positive field; Many diplococci of medium size; many bacilli of colon morphology, and some longer than these; few free spores; here and there a slender bacillus with oval terminal spore.
July 16	Gram negative: Spirilla in small numbers and some of colon morphology. Positive: Many large coccal bodies; many medium-sized diplococci; many bacilli of colon morphology and some longer than these and curved; some bacilli approximating aerogenes in morphology; here and there bacilli with central spores.	Gram positive field: Abundant diplococci, some in chains; many bacilli of colon morphology; some bacilli approximating *Bacillus aerogenes capsulatus* type, but shorter.	Practically Gram positive field: Many cocci in pairs and in chains; many bacilli of colon morphology; many bacilli slightly longer than the colon, slender and slightly curved; some bacilli of about aerogenes morphology, but shorter.
July 20	Gram positive predominating. Negatives are slender spiral and some bacilli of colon morphology. Positive: Many large coccal bodies; many medium-sized diplococci; some bacilli of about aerogenes morphology, but mostly shorter or longer than typical; many bacilli of colon morphology, and some longer than these and slightly curved; here and there bacilli with central spores.	Gram positive exclusively: Medium-sized diplococci, some in chains predominate, some bacilli of about colon morphology; some bacilli of about aerogenes morphology but longer or shorter than typical aerogenes.	Positive field: Abundant medium-sized diplococci; many bacilli of colon morphology, and some longer than colon and slightly curved; some bacilli slightly shorter than aerogenes.
July 23	Gram positive predominating. Negatives are spiral organisms and bacilli of colon type. Positive: Many large coccal bodies; many clumps of and scattered diplococci; some bacilli of colon morphology, and some longer, slightly curved, a few with pointed ends; some of about aerogenes type, but shorter or longer.	Positive field: Diplococci in great numbers, some in chains, some bacilli of colon length, but stouter; some bacilli of about aerogenes type, but shorter.	Positive field: Many bacilli of about colon morphology and many of same thickness, but longer; some bacilli of aerogenes capsulatus type; some medium-sized diplococci.
July 27	Gram positive and negative about equal. Negatives are spiral organisms, some of colon type and a few long threads. Positive: Some large coccal bodies; many medium-sized diplococci; some bacilli of colon morphology and some longer than these; here and there bacillus of about aerogenes type, but shorter or longer.	Very few Gram negative. These are long slender organisms. Positive: Few diplococci of medium size; many bacilli of colon length but stouter than colon; here and there stout bacilli of about aerogenes type, but longer or shorter than typical.	Positive: Many diplococci of medium size; many bacilli of about colon morphology, but longer; some very long threads; some bacilli of colon type; a few bacilli of aerogenes type.

Results of Gram-stain tests on feces—Continued.

SUBJECT I (H. N. B.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 30	Mostly Gram positive. Negative: A few colon type, a few spirals, and some long threads. Positive: Some large coccal bodies; many medium-sized diplococci; some bacilli of colon morphology and some longer than these; some bacilli of aerogenes thickness, but not proper length: here and there thick bacilli with central spore.	Positive field: Many medium-sized diplococci; many bacilli of colon length but stouter; some bacilli approaching aerogenes in morphology.	Positive field: Many large bacilli of aerogenes morphology, but of varying length; many bacilli of colon morphology; good many bacilli in chains of subtilis type with central spore.
Aug. 3	Gram positive predominating. Negatives are of colon type, a few spiral organisms and some long threads. Positive: Some large coccal bodies and diplococcal bodies; many medium-sized diplococci; good many of colon type and longer, some of which are slightly curved and have pointed ends; some bacilli approaching morphology of aerogenes capsulatus type; a few long thick bacilli with central spore.	Positive field: Profusion of medium-sized diplococci; many bacilli of colon length, but stouter; some bacilli of about aerogenes type but shorter than typical.	Positive field: Some bacilli of colon type; a few medium-sized diplococci; some bacilli of aerogenes type; many bacilli in chains of subtilis type with central spore. (Contamination?); a few free spores.
Aug. 6	Gram positive predominating. Negatives are of colon type and a few spirals. Positive: Some large coccal bodies; good many medium-sized diplococci; some bacilli of colon type and some longer than these; some bacilli of colon length, but stouter than colon; a few bacilli of aerogenes capsulatus type, and some of similar morphology, but longer.	Positive field: Very many medium-sized diplococci; some bacilli of colon type and some slightly longer; a few very long, slender bacilli.	Practically gram positive field: Many bacilli of colon type and many longer than these; some medium-sized diplococci; a few very long threads; a few bacilli of aerogenes capsulatus type; a few bacilli of about subtilis morphology, some with central spores.
Aug. 10	Gram positive predominating. Gram negatives are of colon type, some spirals and some long slender bacilli. Positive: Some large coccal and diplococcal bodies; many medium-sized diplococci; some bacilli of colon type; some longer than colon and slender; a few bacilli of aerogenes capsulatus type, but of varying length.	Positive field: Majority are diplococci, some in chains; a few bacilli of colon morphology; most of the bacilli are of aerogenes capsulatus type, but of varying length.	Majority Gram positive. Negatives are of colon type. Positive: Majority are slender medium-length bacilli; a few of colon morphology; a few of the slender medium-length bacilli have headlet extremity; a good many bacilli of aerogenes capsulatus type; a few of bacilli subtilis type; here and there free spores.
Aug. 14	Mostly Gram positive. Negatives are of colon type, a few spiral organisms and some long threads. Positive: Some large coccal and diplococcal bodies; majority are medium-sized diplococci; some bacilli of colon morphology; good many bacilli longer than colon and slender; a few of aerogenes capsulatus type; a few of subtilis (?) type.	Positive field: Majority are medium-sized diplococci, a few in short chains; remainder are thick bacilli varying from colon length to morphology of aerogenes.	Mixed positive and negative. Negatives are of colon type and some bacilli that are rather long and slender. Positive: Majority are bacilli of aerogenes capsulatus type; many of medium length and slender; a few of colon morphology; a few medium-sized diplococci.
Aug. 17	Majority Gram positive. Negatives are of colon morphology and some long slender bacilli. Positive: Good many large coccal bodies; good many medium-sized diplococci; some bacilli of colon morphology; good many bacilli of medium length or long and slender; a few of these have bulbed extremity; a few bacilli of aerogenes capsulatus type; a few of subtilis (?) type.	Positive field: Majority are medium-sized diplococci; remainder are thick bacilli, some of colon length, others about morphology of the aerogenes.	Gram positive field: Predominant organism is of colon morphology, but more slender and with somewhat pointed ends; a few of these are "punctate;" good many bacilli of colon morphology; occasional medium-sized diplococci; a few spore-bearing bacilli in chains of subtilis type; here and there a long slender thread.
Aug. 20	Gram positive predominating. Negatives are bacilli of colon length and longer, and a few spirochete-like. Positive: A few large coccal bodies; many medium-sized diplococci; majority are bacilli of medium length and thickness, some longer; some bacilli of colon morphology; a few of subtilis morphology, one with central spore; here and there a bacillus of aerogenes capsulatus type.	Positive field: Almost exclusively medium-sized diplococci; a few bacilli that are stout and as long as or slightly longer than colon.	Positive field: Mixed field of bacilli of subtilis type and bacilli-like aerogenes; many bacilli with terminal oval spore; a few free spores; a few medium-sized diplococci; here and there bacilli of colon morphology; some very long threads.

Results of Gram-stain tests on feces—Continued.

SUBJECT I (H. N. B.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Aug. 24	About equally Gram positive and negative. Negatives are of colon type, some longer, and some spirals. Positive: A few large coccal bodies; many medium-sized diplococci; bacilli of medium length and thickness predominate; some bacilli of colon morphology; here and there bacilli of aerogenes type.	Positive field: Medium-sized diplococci predominate; a few very long threads; a few bacilli that are stout and vary from colon length to morphology of aerogenes.	Positive field: Majority are medium-sized diplococci; some bacilli of colon morphology; many bacilli of medium length or longer and slender.
Aug. 27	Gram positive predominate. Negatives are of colon type, some spirochete-like organisms and some rather long slender bacilli. Positive: Some rather large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology; some slightly longer; a few rather stout, short, and medium length bacilli; here and there a bacillus approaching morphology of aerogenes.	Positive field: Majority are medium-sized diplococci; good many thick bacilli varying from colon length to morphology of aerogenes or longer; a few long thick threads.	Positive field: A few medium-sized diplococci; some bacilli of colon morphology; many long thin bacilli or threads, a few of which are partially decolorized; the predominant bacterium is a long slender bacillus, which in places seems to be partially decolorized; a few of these positive bacilli have swellings on the end.
Aug. 31	Gram positive and negative about equal. Negative are of colon morphology or longer and a few spirals. Positive: A few large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology, and some slightly longer; some rather stout bacilli varying from length of colon to about aerogenes morphology.	Positive field: Majority are medium-sized diplococci; good many thick bacilli varying from the length of the colon to about aerogenes morphology.	Very few negative bacilli of colon type. Positive bacilli of colon morphology in predominance. A few medium-sized diplococci. A good many rather thick single bacilli of about medium length or of aerogenes morphology, some with central spores. Many free spores.
Sept. 3	Gram positive predominate. Negative are of colon type or slightly longer. Positive: A few large coccal bodies; many medium-sized diplococci; many bacilli of colon morphology and many longer than these; very few of aerogenes type; here and there a few spores.	Positive field: Majority are medium-sized diplococci; remainder are thick bacilli of aerogenes type or of medium length; some long threads.	Positive field: Majority are bacilli of colon type or slightly longer; good many bacilli in chains of subtilis type; a few rather thick bacilli of about aerogenes morphology or shorter.
Sept. 8	Gram positive in predominance. Negative are of colon type or longer. Positive: A few large coccal bodies; many medium-sized diplococci; many bacilli of colon morphology; many bacilli longer and perhaps more slender than colon; a few of aerogenes type; here and there a free spore.	Positive field: Majority are medium-sized diplococci; the rest are stout bacilli of aerogenes morphology; some long threads.	Positive field: Majority are bacilli of colon morphology or longer than colon; good many medium-sized diplococci; some very long very slender bacilli or threads; good many rather thick bacilli of aerogenes morphology or shorter, with central ova spore; a few free spores.
Sept. 11	Positive predominate. Negative of colon type. Positive: Some large coccal bodies; good many medium-sized diplococci; majority are of colon morphology; few of aerogenes type.	Like last examination...	Good many negative bacilli of colon morphology. Positive: Many medium-sized diplococci; some of colon type; majority are rather thick bacilli of about aerogenes morphology or shorter.
Sept. 15	Negative predominate. These of colon type. Positive: Some large coccal bodies; good many medium-sized diplococci; a good many bacilli of colon morphology or more slender; a few of aerogenes morphology; here and there bacilli resembling subtilis in morphology.	.....do.....................	Negative bacilli of colon type predominate. Positive: Bacteria are exclusively large thick bacilli of about aerogenes morphology, except that some of them have terminal spores.
Sept. 18	Like last description, except that positive and negative bacilli are about equal. A few spores also were seen here.	.....do.....................	Positive predominate. Negative of colon type. Positive are thick bacilli of medium length or short, a few like aerogenes in morphology. Here and there a free spore.

Results of Gram-stain tests on feces—Continued.

SUBJECT I (H. N. B.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Sept. 22	Like last examination	Like last examination	Positive field: Majority are medium sized diplococci; good many bacilli of aerogenes morphology, except that they are of medium length or short.
Sept. 25	Gram positive and negative about equal. Negative are of colon type and a few spiral organisms. Positive: Few large coccal bodies; some medium-sized diplococci; majority of bacilli are of colon type or a little longer, but some are slender and slightly curved; few of aerogenes morphology; few large bacilli with central spore.	do	Positive field: Field filled with bacilli of colon morphology; a few chains of subtilis type with central spore; some stout bacilli varying in length from short to aerogenes morphology, or longer; a few free spores.
Sept. 29	Gram positive predominate. Negative are of colon type and spiral organisms. Positive: Majority are medium-sized diplococci; a few large coccal or diplococcal bodies; majority of the bacilli are of colon type or somewhat longer and curved; very few stout bacilli of aerogenes morphology.	Positive: Practically all are medium-sized diplococci; few stout bacilli of variable lengths, some of aerogenes morphology.	Few negative bacilli of colon type. Positive: Good many rather large bacilli, some approximating aerogenes in morphology, and some with terminal spore; few bacilli of colon morphology; some medium-sized diplococci.
Oct. 2	Positive and negative about equal. Negative are of colon type and a good many rather long slender bacilli. Positive: Few large coccal bodies; good many medium-sized diplococci; majority of bacilli are of colon morphology, some slightly more slender and curved; very few bacilli of aerogenes morphology.	Positive field: Practically all are medium-sized diplococci; few stout bacilli, some of aerogenes type, but others of variable length.	Positive field: Majority are bacilli of about colon morphology or slightly longer and some curved; some very long slender threads; very few medium-sized diplococci.
Oct. 6	Few negative. These are of colon type, and here and there a long slender bacillus. Positive: Some large cocci and diplococci; good many medium-sized diplococci; majority of bacilli are of colon type or more slender and slightly curved; very few of aerogenes type.	Positive field: Practically all are medium-sized diplococci; few thick bacilli of varying lengths.	Positive field: Majority are rather stout long bacilli some with terminal spore; few bacilli of colon type. Some medium-sized diplococci.
Oct. 9	Few Gram negative. These are of colon type, or slightly longer, and a few spirochete-like. Positive: Good many medium-sized diplococci; good many of colon morphology; good many more slender than colon, some slightly curved; some of aerogenes type, but more slender; a few of aerogenes morphology; a few large thick bacilli, some with spores (?); here and there free spores.	Positive field: Practically all are medium-sized diplococci; a few stout bacilli of aerogenes morphology, but varying in length from medium to long; here and there a long slender thread.	Mostly Gram positive. Negative are medium length bacilli of medium thickness, some of which are not decolorized in spots. Positive: Majority are bacilli of medium length and thickness; good many of colon morphology; good many medium-sized diplococci; few bacilli of about ærogenes type.
Oct. 13	Good many negative. These of colon type are slightly longer, and some very long slender bacilli, some of which have two or three bends. Positive: Few large coccal bodies; many medium-sized diplococcal; good many of colon type and slightly longer; few of aerogenes type; a few much larger than aerogenes; a few free spores.	Like last description	Positive field: Few medium-sized diplococci; few of colon type; good many slightly longer and more slender than colon; many long slender bacilli, some of which have terminal enlargements like headlets, but in places the enlargements are more pronounced and show as spores.
Oct. 16	Few negative of colon type. Positive: Some large coccal bodies; good many medium-sized diplococci; good many of colon morphology; some of colon morphology, but curved; good many slightly longer and more slender than colon; very few of aerogenes type; few stouter and shorter than ærogenes; few free spores; occasional clostridium-like organisms.	Positive field: Majority are medium-sized diplococci; some bacilli of almost aerogenes morphology and some shorter; some bacilli more slender than aerogenes and of varying lengths, short to long.	Positive field: Majority are large bacilli of ærogenes diameter, some of ærogenes length, others shorter and longer; few medium-sized diplococci; some bacilli of colon morphology; few bacilli more slender and slightly longer than colon.

Results of Gram-stain tests on feces—Continued.

SUBJECT I (H. N. B.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Oct. 20	Good many negative. These of colon morphology, slightly longer than colon and some slender bacilli of colon and thrice colon length. Positive: Like last description except here are a few bacilli more slender than aerogenes, but of aerogenes and of medium length; a few bacilli with central spores; no clostridia seen.	Like last description except cocci practically in pure culture; few of large bacilli; some of aerogenes morphology, others more slender.	Few negative of colon morphology. Positive: Good many large spore-bearing bacilli like subtilis; few free spores, majority are bacilli more slender than aerogenes and of medium length or short Good many bacilli of colon morphology.
Oct. 23	Excepting the addition of a few slender spiral Gram negative organisms this smear give picture like last one.	Like last sediment......	Positive field: Practically all are of colon morphology; few bacilli more slender than aerogenes and of medium length.
Oct. 27	Gram positive and negative about equal. Negative are mostly very slender and as long as colon or very long. Some of colon morphology. Positive: Organisms like last smear.	Like last description of Oct. 20.	Good many partly negative "punctate" bacilli of colon morphology, but slightly longer Few negative of colon morphology. Positive: Majority are of colon morphology and slightly longer; some of colon morphology but more slender than colon; good many bacilli of aerogenes morphology; here and there an organism with central spore of subtilis type.
Oct. 30	Like last smear, except here some of the long slender negative organisms are spiral in shape.	Like last sediment......	Good many negative of colon type and some slightly more slender. Positive: Many medium-sized diplococci; some bacilli of colon morphology; some similar but with pointed ends; some like colon, except more slender and slightly longer.

SUBJECT II (W. W. C.).

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 2	Gram negative predominate. These are of colon type, some longer, and some long threads. Positive: A few large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology, and many longer than these; good many bacilli of a morphology approaching that of aerogenes.	Positive field: A few medium-sized diplococci; some bacilli of colon morphology, and some longer than this; many bacilli of aerogenes type; a few of subtilis morphology; a few free spores (contamination?).	Positive field: Field full of bacillus, subtilis and free spores (contamination?).
July 7	Gram positive and negative equal. Negative are of colon type, some longer than usual colon morphology, and some long threads. Positive: Some large coccal bodies; some medium-sized diplococci; many bacilli of colon type; many bacilli longer than colon, but same thickness; a few bacilli of aerogenes capsulatus type; a few bacilli of subtilis type. Here and there a free spore.	Positive field: A few diplococci; some bacilli of colon morphology, many of bacillus aerogenes capsulatus type, but of varying length; here and there bacilli of subtilis type.	Gram positive predominate. Negative are of colon type or slightly longer. Positive: Few medium-sized diplococci, some bacilli of colon type or longer than typical; many bacilli of aerogenes capsulatus type, but of varying morphology.
July 9	Few gram negative. These are of colon type and long threads. Positive: Some large coccal bodies; many medium-sized diplococci; some of colon type and some longer than typical colon; some bacilli of aerogenes capsulatus type, but not typical; a few very long thick organisms.	Few negative. These in morphology like the predominant gram positive, except shorter. Positive: Bacilli-like aerogenes, but of varying length in predominance; a few medium-sized diplococci; a few of colon type.	Gram positive predominate; many bacilli-like aerogenes, but narrower; some of colon type and some slightly longer than these; a few bacilli of subtilis type; here and there a few large bacilli with central spore; some very long threads.

Results of Gram-stain tests on feces—Continued.

SUBJECT II (W. W. C.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 13	Positive predominate. Negative are of colon type, some longer and a few spirals. Positive: A few large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology; many of aerogenes type, but more slender than typical. Some long threads; a few stout bacilli with central spore.	Positive field: A few diplococci of medium size; some bacilli of colon morphology, a few in diplobacillus form; many of aerogenes type, but more slender; a few long threads.	Positive field: A few diplococci of medium size; good many of colon morphology; many longer than these; some rather slender bacilli with headlet. A few bacilli of aerogenes capsulatus type; a few bacilli with central spore; here and there a free spore.
July 16	Positive predominate. Positive: A few large coccal bodies; good many medium-sized diplococci; some bacilli of colon morphology; some bacilli longer and thinner than colon; a few long threads; a few bacilli resembling subtilis.	Positive field: Many medium-sized diplococci; some bacilli of colon morphology, a few rather plump bacilli in short chains; a few bacilli of aerogenes capsulatus type; here and there a long thread.	Positive field: A few medium-sized diplococci; some bacilli of colon morphology; majority are bacilli-like colon, but stouter; some bacilli approaching morphology of aerogenes.
July 20	Positive predominate. Positive: A few large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology and some stouter than these; some bacilli more slender and longer than the colon; a few bacilli of aerogenes capsulatus type.	Positive field: Many medium-sized diplococci; many bacilli like colon in morphology but plumper; some large coccal bodies; some bacilli of aerogenes capsulatus type, but of varying length.	Positive field: Majority are slender bacilli of medium length; some of the longer ones like these have headlets; some bacilli of colon morphology; some medium-sized diplococci; here and there a bacillus of aerogenes capsulatus type; a few long threads.
July 23	Gram positive and negative about equal. Positive: A few large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology and a few plumper than these; some approaching aerogenes in morphology; here and there a thick bacillus with central spore; predominant organism is one more slender and longer than colon.	Positive field: Many medium-sized diplococci; some short bacilli of colon morphology, but thicker; a few bacilli like aerogenes; a few medium-length slender bacilli.	Positive field: Majority are medium length, slender bacilli, some slightly curved, a few headlets; many diplococci; some bacilli of colon type; a few bacilli approaching morphology of aerogenes, but of varying length.
July 27	Positive: A few large coccal bodies; some medium-sized diplococci; a good many bacilli of colon morphology and longer; some of the latter in chains of two or three; here and there a thick bacillus with central spore; a few free spores; some bacilli of aerogenes capsulatus type, but of varying length.	Positive field: Many medium-sized diplococci; many bacilli of colon morphology, but slightly thicker; some of colon morphology; some medium-sized slender bacilli; a few bacilli approaching aerogenes in morphology.	Positive field: Many slender bacilli, some slightly curved, of colon length or longer; some of colon type and some slightly thicker; a few bacilli with headlet; a few medium-sized diplococci; here and there a long thread; very few approaching bacillus aerogenes in morphology.
July 30	Positive field: Many medium-sized diplococci; some bacilli of colon type, some longer than typical, some longer and more slender, and some plumper than colon; some of the latter in pairs; a few free spores; a few bacilli of aerogenes capsulatus type; a few bacilli with occasional central spore resembling subtilis.	Positive field: Many medium-sized diplococci; remainder are bacilli of colon length or a little longer, but thicker than colon.	Positive field: Many bacilli of subtilis type in chains (contamination?); many slender bacilli of colon length, but plumper; a few bacilli of aerogenes capsulatus type.
Aug. 3	Positive predominate. Positive: A few large coccal bodies; some medium-sized diplococci; majority of bacteria are bacilli of about colon length or longer, but more slender than colon; some plumper than colon, but of colon length; some of colon morphology; a few approaching morphology of aerogenes.	Positive field: Some medium-sized diplococci; a few large coccal bodies; majority are bacilli slightly longer and thicker than colon; a good many of colon morphology; some like aerogenes, but of varying length.	Positive field: Majority are slender bacilli of medium length or longer; some of colon type; a few medium-sized diplococci; some bacilli of subtilis type; a few free spores; a few plumper than colon; a few like aerogenes, but of varying length.
Aug. 6	Positive predominate. Positive: Some large coccal bodies; many medium-sized diplococci; some slender bacilli of medium length; a few rather long and slender; many bacilli of colon length or longer, but thicker than colon; a few bacilli like aerogenes.	Positive field: Good many medium-sized diplococci; majority are bacilli of colon or medium length, but thicker than colon; very few slender medium length bacilli; few of aerogenes morphology, but of varying length.	Positive field: Some medium-sized diplococci; majority are medium length slender bacilli; many of colon morphology, and many slightly thicker; some free spores; very few of aerogenes morphology.

Results of Gram-stain tests on feces—Continued.

SUBJECT II (W. W. C.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Aug. 11	Gram positive predominate. Positive: A few large coccal bodies; good many medium-sized diplococci; some bacilli of colon morphology; some longer; some of colon length but stouter, a few of which are in pairs; a few of aerogenes type, but of varying length and thickness.	Positive field: Majority are medium-sized diplococci; a good many bacilli of colon length but thicker; a few bacilli of aerogenes capsulatus type, but of varying lengths.	Positive field: Majority are slender bacilli of medium length; some bacilli of colon morphology, and some longer; some of colon length but stouter; a few of subtilis type; a few of aerogenes type.
Aug. 13	Positive field: Good many medium-sized diplococci; some bacilli of colon morphology; many of colon length, but stouter; some bacilli of medium length and slender; some bacilli of aerogenes capsulatus type; a few thicker and stouter than aerogenes; a few long threads.	Like last description....	Positive field: Majority are medium length slender bacilli; a few of the longer ones have headlet; some bacilli of colon morphology; a few plumper than colon; some bacilli of aerogenes type; a few medium-sized diplococci; a few bacilli of subtilis type; a few free spores; a few long threads.
Aug. 14	Few negative of colon type. Positive: Some medium-sized diplococci; good many bacilli of medium diameter and of colon length and longer; some of colon morphology; some of colon length and slightly stouter; some approximating aerogenes in morphology; here and there large stout bacilli of unknown morphology.	.....do..................	Few negative of colon type. Positive: Majority are slender bacilli of colon length and slightly longer; some of colon morphology; some bacilli of subtilis morphology; some bacilli of colon length, but slightly thicker.
Aug. 24	Like last description..................	.....do..................	Positive field: A few medium-sized diplococci; some bacilli of colon morphology; good many bacilli of medium length or longer and of colon thickness; good many short bacilli thicker than colon, a few of which are in chains of two; here and there bacilli of aerogenes capsulatus type.
Aug. 27	Few negative of colon type and a few spiral organisms. Positive: Many medium-sized diplococci; a few large coccal and diplococcal bodies; some bacilli of colon type; some bacilli slightly stouter, but of colon length, and some of same stout morphology, but longer than colon; good many bacilli of aerogenes capsulatus type, and some longer than typical.	.....do..................	Positive field: Some medium-sized diplococci; some bacilli of colon morphology; many long thin threads, some of which are partially decolorized; good many slender medium length or long bacilli; a few of aerogenes capsulatus type; some bacilli resembling subtilis, with occasional central spore; a few long slender bacilli with terminal spore.
Aug. 31	Like last description, plus some bacilli about aerogenes diameter but shorter, resembling subtilis.	.....do..................	Like last description, except no long thin threads; many long slender bacilli with terminal round spore resembling tetanus.
Sept. 3	Positive field: A few large coccal bodies; good many medium-sized diplococci; some bacilli about aerogenes capsulatus morphology; some rather long threads; majority are bacilli of colon morphology or a little longer.	Positive field: Almost exclusively medium-sized diplococci; remainder are rather thick bacilli of aerogenes and medium length, but slightly more slender than aerogenes.	Positive field: Majority are bacilli of colon morphology; some rather long slender bacilli, some of which have terminal enlargements (spores?); good many very long slender threads; a few medium-sized diplococci.

Results of Gram-stain tests on feces—Continued.

SUBJECT II (W. W. C.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Sept. 8	Few negative of colon type, and a few rather long thick bacilli partially decolorized. Positive: Some large coccal and diplococcal bodies; good many medium-sized diplococci; many bacilli of colon morphology or slightly longer than colon; some bacilli of ærogenes capsulatus type, and others of same diameter, but shorter; here and there a long thick thread.	Like last description plus some rather long thick threads.	Good many negative long slender bacilli and long slender threads, some of the latter partially decolorized. Positive: Some bacilli of colon type; a good many long slender bacilli like those described Gram negative; some thick bacilli of about subtilis morphology, mostly singly, but a few in chains of two or three; some bacilli of ærogenes capsulatus type; others of same thickness but shorter.
Sept. 11	Positive predominate. Positive: Many medium-sized diplococci; a few large coccal and diplococcal bodies; many bacilli of colon morphology; many bacilli of colon morphology, but longer; a few slender threads; moderate number of thick bacilli of ærogenes morphology and shorter.	Positive field: Practically all are medium-sized diplococci; very few thick medium length bacilli.	Negative predominate. These are of colon type and some rather thick long bacilli, some like threads. Positive: A few medium-sized diplococci; few bacilli; these are of colon type; some medium length bacilli of ærogenes diameter, and some slender long bacilli, a few of which should be called threads.
Sept. 15	Like last description. Some of the bacilli of colon length, but more slender are curved.	Few negative of colon type. Positive: Majority are medium-sized diplococci; good many of colon type; some thick bacilli varying from aerogenes morphology to short bacilli.	Positive field: Good many free spores; majority are about colon morphology; several headlet forms (?) seen in slender medium length or long bacilli; good many short thick bacilli, many with central spores; a few medium sized diplococci.
Sept. 18	Like last sediment	Positive field: Majority are medium sized diplococci; remainder are bacilli of approximately aerogenes morphology or shorter, mostly slightly more slender than typical aerogenes.	Positive field: Majority are slender bacilli slightly longer than colon; many long thin Gram positive threads; a few medium-sized diplococci; a few bacilli of aerogenes morphology; a few free spores.
Sept. 22	Gram positive predominate. Positive: Many medium-sized diplococci; a few large coccal or diplococcal bodies; many bacilli of colon morphology or longer than colon; a few long slender threads; few thick bacilli of aerogenes morphology or shorter than these.	Negative predominate. These of colon type, some slightly longer, and a few very long bacilli of colon diameter. Positive: Good many medium-sized diplococci; good many short, rather thick bacilli.	Negative predominate. These are of colon morphology, and some long, slender bacilli. Positive: Good many rather thick, long bacilli, many with terminal spore; few free spores.
Sept. 25	Practically positive field; field filled with medium-sized diplococci; a few large coccal bodies; some bacilli of aerogenes type; some bacilli of colon type.	Positive field: Practically all are medium-sized diplococci; some rather large stout bacilli approximating aerogenes in morphology; 1 very long stout thread.	Few negative; these of colon type. Positive: Majority are bacilli of colon morphology or longer; 1 headlet seen; few chains of medium-sized diplococci; here and there bacilli of aerogenes type.
Sept. 29	Few negatives; these of colon type; field filled with diplococci; moderate number of bacilli of colon morphology some of which are curved; considerable number of bacilli of aerogenes capsulatus type; 1 very long partly decolorized thread.	Positive field: Practically all are medium-sized diplococci; a few large coccal bodies; considerable number of rather thick bacilli varying from medium length to long threads.	Few negative; these of colon type. Positive: Field full of colon type bacilli or slightly longer than colon; several headlets seen; 1 slender bacillus with terminal round spore like tetanus; considerable medium-sized diplococci.

Results of Gram-stain tests on feces—Continued.

SUBJECT II (W. W. C.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Oct. 2	Flora the same as last one, except there are much fewer diplococci.	Positive field: Nearly pure culture of medium-sized diplococci; few stout bacilli of varying lengths.	Few negative of colon type. Positive: Good many bacilli of about colon morphology, and some longer than colon; a few bacilli seen with gram positive globules or irregular staining; a good many rather stout bacilli of about aerogenes morphology, a few of which have terminal spores; few free spores; some stout long bacilli with central spore.
Oct. 6	Gram positive almost exclusively; majority are medium-sized diplococci; few large coccal bodies; few bacilli of colon morphology or somewhat longer than colon; good many bacilli approaching aerogenes morphology, but varying considerably in length.	Positive field: Practically all are medium-sized diplococci; a few stout bacilli of aerogenes morphology.	Positive field: Almost pure culture of slender, slightly curved medium length bacilli, some somewhat longer; 1 headlet form seen; some bacilli of colon morphology; here and there some rather long stout bacilli with central spores; a few free spores.
Oct. 9	Practically all are Gram positive; majority are medium-sized diplococci; few large coccal bodies; few bacteria of colon type; some bacilli of medium length and slender; good many bacilli of aerogenes capsulatus type, some slightly more slender; some very stout long bacilli with rounded ends.	Positive field: Practically all are medium-sized diplococci; a few stout bacilli varying from medium length to long.	Difficult to tell Gram positive from Gram negative; practically all are Gram positive; majority are medium length slender bacilli, and some longer; 1 headlet (?) seen; some of colon type; few medium-sized diplococci; few approximating aerogenes.
Oct. 14	Few negative of colon type or slightly longer. Positive: Good many medium-sized diplococci; few large coccal bodies; good many of colon type; good many slightly longer and more slender than colon; few of aerogenes type; here and there one with spore and clostridium-like; few free spores.	Negative in predominance; these of colon type or slightly longer. Positive field equally divided between medium-sized diplococci and large stout bacilli, some approximating aerogenes morphology, others shorter.	Few negative of colon type. Positive: Majority of colon morphology but longer; some of colon morphology; a few medium-sized diplococci; good many large bacilli of about aerogenes diameter, some of aerogenes length; others are slightly stouter and of medium length and short; some free spores.
Oct. 16	Few negative of colon type. Positive: Some large coccal and diplococcal bodies; good many medium-sized diplococci; good many bacilli of colon type; others like colon but more slender and curved; others slightly longer than colon, but of colon thickness; some of aerogenes morphology, but more slender; few of aerogenes morphology; few bacilli very stout and very short or long.	Positive field: Practically all are medium-sized diplococci; few of aerogenes thickness, but of varying lengths, short to long; few more slender than aerogenes, but of aerogenes length.	Some negative bacilli slightly longer than colon, and some of colon morphology. Positive: Majority are slender, long, and medium length bacilli; a few of these are irregularly Gram positive, and some have swellings on end; others of this type have distinct terminal oval spores; few medium-sized diplococci.
Oct. 20	Few negative bacilli of colon morphology, some slightly more slender than colon, and some slightly longer than colon. Positive: Like last description.	Like last description....	Positive field: Few medium-sized diplococci; good many bacilli of colon morphology; good many long slender bacilli, some of which have terminal oval spores; good many long stout bacilli with rounded ends and bulging centers, but no distinct central spores; here and there 1 of aerogenes morphology.
Oct. 23	Like last description....................	.....do........	Positive field: Good many medium-sized diplococci; good many long slender bacilli with terminal oval spores; majority are bacilli of colon morphology, some slightly longer than colon.

Results of Gram-stain tests on feces—Continued.

SUBJECT II (W. W. C.)—Continued.

Date	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908.			
Oct. 27	Good many negative bacilli. These are of colon type; some slightly longer than colon, some considerably longer and thicker than colon, and a good many slender short, and medium length rods and spirals. Positive: Like last description.	Like last description...	Good many partly negative "punctate" bacilli of colon thickness, and perhaps twice colon length. Positive: Majority are bacilli of colon morphology and slightly longer than colon; good many bacilli more slender and much longer than colon; many bacilli of aerogenes morphology; good many bacilli more slender than aerogenes and varying in length from short to long.
Oct. 30	Few negative of colon morphology, and some more slender and longer than colon and curved. Positive: Like last description.	Few negative of colon type, and some slightly longer than colon. Positive: Like last description.	Majority are negative of colon morphology; some slightly longer, and some very long and slender. Positive: Few medium-sized diplococci; here and there one of aerogenes morphology. Good many bacilli more slender than aerogenes, but of aerogenes and of medium length. A few "punctate" bacilli of colon thickness, but slightly longer.

SUBJECT III (A. G.).

Date	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908.			
July 3	Gram positive and negative about equal. Negative are of colon type; some slightly longer than colon and a few slightly longer and thicker than colon. Positive: Good many large coccal and diplococcal bodies; good many medium-sized diplococci; some bacilli of colon morphology; some slightly thicker than colon; majority are bacilli slightly longer than colon and slightly more slender; some large bacilli containing spores; few of aerogenes capsulatus type.	A few Gram negative of colon type. Positive: Almost exclusively medium-sized diplococci; a few of colon morphology; here and there bacilli of aerogenes capsulatus type; a few thicker than aerogenes and shorter like subtilis.	Gram negative predominate. These are of colon type and some longer and more slender than colon. Positive: Here and there free spores; a few medium-sized diplococci; majority are bacilli of aerogenes morphology, but of varying lengths; a good many bacilli of subtilis type. Some free spores.
July 7	Majority are Gram positive. Negative are of colon type or slightly longer than colon. Positive: A few large coccal and diplococcal bodies; good many medium-sized diplococci; majority are bacilli slightly longer and more slender than colon; some of colon morphology; some thick bacilli varying from colon length to aerogenes morphology, mostly medium length.	Positive field: Good many medium-sized diplococci; some of colon morphology; good many chains of subtilis type (contamination); few of aerogenes capsulatus type.	Mostly Gram positive; few negative of colon type; many medium-sized diplococci; majority of bacilli are of colon morphology; some slightly longer than colon, but of colon diameter; many bacilli of aerogenes morphology, some with spores; a few free spores.
July 10	Few negative of colon type or slightly longer. Positive: Good many coccal and diplococcal bodies; many medium-sized diplococci; some bacilli of colon morphology; majority of bacilli are slightly longer and more slender than colon; a few of aerogenes type; few bacilli stouter and shorter than aerogenes.	Positive field: Majority are medium-sized diplococci, some in short chains; good many bacilli of colon morphology, and some slightly longer than colon; few bacilli of aerogenes type.	Positive field: Many bacilli of subtilis type; a few medium-sized diplococci; some bacilli of colon morphology, and some slightly longer than colon.
July 14	Few negative of colon type, some more slender and a few spirals. Positive: Some large coccal bodies; many medium-sized diplococci; many slender medium length bacilli; some like these, but considerably longer; some bacilli of colon morphology; some like these, but thicker; a few bacilli of aerogenes morphology.	Positive field: Some medium-sized cocci and diplococci; good many of colon length, but thicker; many bacilli of aerogenes thickness but of varying lengths.	Positive field: Some medium-sized diplococci; practically all bacteria are of colon morphology or slightly longer than colon; very few of aerogenes type.

Results of Gram-stain tests on feces—Continued.

SUBJECT III (A. G.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 17	Positive predominate. Negative are of colon type, some longer and slender, and a few spirals. Positive: Few large coccal bodies; good many medium-sized diplococci; some bacilli of colon morphology; some bacilli of colon morphology, but thicker; good many bacilli slightly longer and more slender than colon, few of aerogenes type; some large thick bacilli with spores.	Positive field: Majority are small diplococci; few of colon morphology, but thicker than colon, and some approaching aerogenes in morphology.	Positive field: Majority are bacilli slightly longer and perhaps more slender than colon; remainder of bacilli are thicker and approach aerogenes in morphology; a few medium-sized diplococci.
July 21	Few negative of colon type and some spirals. Positive: Like last description.	Positive field: Majority are medium-sized diplococci; some thick bacilli, some of colon length, others approaching morphology of aerogenes; a few rather large coccal bodies.	Positive field: Many medium-sized diplococci; majority are bacilli of colon length, but thicker than colon; a few bacilli approaching aerogenes in morphology, but of varying length, mostly of medium length.
July 24	Few negative of colon type and some spirals. Positive: Good many large coccal bodies; many medium-sized diplococci; some bacilli of colon type and some longer than these; some bacilli of colon length or longer, but more slender and are curved and have pointed ends; some of aerogenes morphology.	Positive field: Many medium-sized diplococci, some in chains; some bacilli of aerogenes diameter, but of about colon length, others slightly shorter than aerogenes.	Positive field: Some medium-sized diplococci; many bacilli of colon morphology and many longer than colon; some very long bacilli of about aerogenes morphology.
July 28	Few negative of colon type and some spiral organisms. Positive: A few large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology, but thicker, a few in short chains; good many medium length slender bacilli; some of aerogenes type; a few long threads; a few bacilli approximating subtilis in morphology.	Positive field: Majority are medium-sized diplococci, some in short chains; good many short thick bacilli of colon length; a few bacilli of same thickness approaching aerogenes in morphology, but of varying length, some very long.	Positive field: Some medium-sized diplococci; majority are slender bacilli of medium length or longer, a few with headlet (?); some bacilli of subtilis type in chains; a few large diplococcal bodies; a few of aerogenes type.
July 31	Accident to emulsion of feces.		
Aug. 4	Few negative of colon type, some slightly longer: Positive: Some large coccal and diplococcal bodies; many medium-sized diplococci; some of colon morphology and some thicker than colon. Many slender medium length bacilli; few of aerogenes type; some long threads; a few thick medium length bacilli like subtilis in morphology.	Positive field: Many medium-sized diplococci; bacilli are thick and vary in length from colon length to aerogenes morphology or longer.	Positive field: Some medium-sized diplococci; majority are slender medium length bacilli, some are long and have headlet or very small spore on extremity; good many free spores; a few of colon morphology; few of aerogenes morphology. Here and there stout medium length bacilli with central spore.
Aug. 7	Few Gram negative of colon type and some slightly longer and more slender. Positive: Like last description.	Like last description....	Positive field: Good many medium-sized diplococci; some medium length slender bacilli; good many bacilli of colon morphology, but thicker; good many of colon morphology; some bacilli of subtilis type; a few free spores; here and there a bacillus of aerogenes morphology.
Aug. 11	Like last description....................	....do..................	Positive field: Field full of bacilli of aerogenes morphology; a few free spores; a few short thick bacilli some of which are in chains; a few medium-sized diplococci.
Aug. 14	....do..................................	....do.............	Positive field: Field full of large thick bacilli of aerogenes capsulatus type; a few in chains of subtilis type; a few free spores; some medium-sized diplococci; a few of colon morphology and some thicker than colon.

Results of Gram-stain tests on feces—Continued.

SUBJECT III (A. G.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Aug. 18	Like last description	Like last description	Positive field: Many bacilli of aerogenes capsulatus type; some of subtilis type; many free spores; some bacilli of colon morphology, and some slightly longer; some of colon morphology, but thicker; some medium-sized diplococci.
Aug. 21	....do	Like last description; some very long thick threads.	Positive field: Majority are thick bacilli, some of medium length, some of colon length, others of aerogenes morphology; some medium-sized diplococci; a few bacilli of medium length and slender.
Aug. 25	Like last description except more of the large coccal bodies.	Like last full description.	Positive field: Majority are meidum-sized diplococci; some small diplococci; a few in chains of subtilis type; remainder are bacilli of aerogenes thickness, but of short or medium length.
Aug. 28	Gram positive predominate. Negative of colon type. Positive: Many medium-sized diplococci; some large coccal bodies; good many of colon morphology; good many slightly longer than colon; many rather stout bacilli, few of these of aerogenes morphology, mostly short.	Positive field: Majority are medium-sized diplococci; remainder are stout bacilli, very few approximating aerogenes in morphology; most of them are of colon or medium length.	Positive field: Field equally divided among diplococci of medium size and stout bacilli, mostly of medium length, here and there one like aerogenes in morphology; a few long thick threads.
Sept. 1	Like last description, except those bacilli that are slightly longer than colon are more in evidence.	Like last examination	Like last examination, except no threads were seen.
Sept. 4	Gram positive predominate. Negative are of colon type and slightly longer, and some spirals. Positive: Some large coccal bodies; good many medium-sized diplococci; majority are bacilli of colon morphology or slightly longer than colon, some slightly curved; some rather thick bacilli, a few of which are of aerogenes morphology, others shorter; a few free spores.	Like last description	Positive field: Good many medium-sized diplococci, some of colon morphology; most of bacteria are rather thick, varying from short to aerogenes morphology, but most of them are of medium length.
Sept. 9	Few negative bacilli; these are of colon type and a few large thick bacilli that are partly decolorized; otherwise flora is as in last description.	....do	Like last description.
Sept. 12–13	Gram positive predominate; negative are of colon type and spirals; one large stout bacillus. Positive: A few large coccal bodies; many medium-sized diplococci; majority are bacilli of colon morphology or longer and more slender; some stout bacilli of aerogenes morphology or shorter; a few bacilli of subtilis morphology; here and there a free spore.	Positive field: Majority are medium-sized diplococci; a few medium-length stout bacilli.	Positive field: Many medium-sized diplococci; many in chains; good many bacilli of colon morphology, some rather thick bacilli of aerogenes morphology or shorter.
Sept. 16	Gram positive predominate. Negative are only of colon type. Positive: A few large coccal bodies; very many medium-sized diplococci, which are predominant; good many bacilli of colon morphology, or longer and more slender; a few bacilli of about aerogenes morphology or shorter.	Picture like that of last examination.	Positive field: Medium-sized diplococci predominating; some of colon type; a few long thin bacilli; good many thick bacilli of aerogenes morphology, others shorter or much longer.
Sept. 19–20	Picture like last examination	Like last examination	Positive field: Good many medium-sized diplococci; some of colon type; a few long thin bacilli and some long thin threads; good many of aerogenes morphology or longer or shorter; a few chains of subtilis morphology.

Results of Gram-stain tests on feces—Continued.

SUBJECT III (A. G.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Sept. 23	Positive and negative about equal. Negative of colon type. Positive: Some large coccal bodies; many medium-sized diplococci; some bacilli of colon morphology, some slightly longer and curved; very few of aerogenes type.	Positive field: Like last description.	Positive predominate: Negative of colon type. Positive: Some medium-sized diplococci; majority are bacilli of aerogenes morphology or shorter.
Sept. 26-27	Few negative of colon type. Positive: Good many large coccal bodies; majority are medium-sized diplococci; considerable number of medium length slender curved bacilli; some bacilli of colon morphology; a few bacilli of aerogenes morphology; a few very stout and very long bacilli of unknown morphology; a few rather long slender threads.	Positive field: Practically all are medium-sized diplococci; a few rather large diplococci in chains; very few stout bacilli of varying lengths.	Positive field: Majority are bacilli of aerogenes capsulatus type, but many are very long; considerable number of medium-sized diplococci; some bacilli of colon morphology.
Sept. 30	Picture here like last description, except that none of the very large bacilli of unknown morphology were seen.	Like last description of this sediment.	Few gram negative of colon morphology. Positive: Majority are about medium length single bacilli, some of which contain spores; a few free spores; a few bacilli of colon morphology.
Oct. 3-4	Picture like last examination, except that there were found some stout bacilli of medium length, a few of which contained central spores.	Positive field: Majority are medium-sized diplococci; a few stout bacilli varying from medium length to about aerogenes morphology.	Positive field: Majority are bacilli of colon morphology, or slightly longer and curved; good many stout long bacilli with terminal oval spores; some bacilli of aerogenes morphology; a few free spores.
Oct. 7	Picture exactly like that of last examination.	Picture just like last examination.	Positive field: Majority are medium-sized diplococci; a few rather large diplococci in chains; many bacilli of colon morphology or longer than these; very few of aerogenes morphology.
Oct. 10-11	Few Gram negative of colon type Positive: Good many medium-sized diplococci; some bacilli of colon type, and a good many longer and more slender; few of aerogenes morphology; some bacilli longer and thicker than aerogenes.	Few gram negative of colon type and some approximating aerogenes in morphology. Positive: Few medium-sized diplococci; majority are bacilli of aerogenes morphology, but varying in length, some very long.	Few Gram negative: These of colon type. Positive: Few medium-sized diplococci; many slender medium-length bacilli; some like these have terminal spores; good many of colon morphology; very few of aerogenes morphology.
Oct. 14	Picture like last description.............	Few Gram negative. These are of the morphology of the bacilli described under gram positive. Positive: Majority are medium-sized diplococci; few bacilli approximating aerogenes in morphology, but shorter than typical.	Positive field: Good many medium-sized diplococci; some of colon morphology; some of colon morphology, but longer than colon; a few of aerogenes morphology, but perhaps slightly narrower.
Oct. 16	Positive field: Few large coccal bodies; many medium-sized diplococci; good many of colon morphology; some like these but more slender and curved; some slightly longer than colon and more slender; few of aerogenes morphology, and a few of aerogenes length, but slightly more slender than typical.	Few negative bacilli like those Gram positive. Positive: Majority are medium-sized diplococci; few of aerogenes morphology or shorter; few bacilli more slender than these, but of same length.	Positive field: Majority are bacilli of aerogenes thickness, but varying from typical length to medium length or short; good many bacilli of colon morphology, and some slightly longer; few medium-sized diplococci.

Results of Gram-stain tests on feces—Continued.

SUBJECT III (A. G.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Oct. 21	Few negative of colon type. Positive: Few large coccal and diplococcal bodies; good many medium-sized diplococci: some of colon morphology and some longer than colon; good many bacilli like colon, but more slender, some curved, and some in comma-form; a few very long and very slender bacilli; a few of aerogenes morphology; a few bacilli more slender than aerogenes, mostly of medium length.	Positive field: Majority are medium-sized diplococci; a few bacilli of aerogenes morphology; good many bacilli more slender than aerogenes, mostly of medium length and short.	Positive field: Few medium-sized diplococci; few of colon morphology; practically all are large bacilli, perhaps more slender than aerogenes, and mostly of short and medium lengths; a few of these approximating aerogenes in morphology; here and there a few bacilli in chains of subtilis type; a few free spores.
Oct. 24–25	Some negative organisms: these are of colon type, a few rather stout medium-length bacilli, a few very long slender bacilli, and a few negative spirals. Positive: Organisms as before.	Majority are medium-sized diplococci; some bacilli stouter and slightly longer than colon; a few negative bacilli of similar morphology.	Very few irregularly gram negative bacilli of colon thickness and slightly longer than colon. Positive: Good many bacilli of colon morphology; practically all are bacilli more slender than aerogenes and of colon and medium length; a few bacilli approximating aerogenes in morphology; few medium-sized diplococci.
Oct. 28	Like last smear	Positive field: Majority are medium-sized diplococci; some of aerogenes morphology; a few bacilli of colon morphology; here and there bacilli more slender than aerogenes and of medium length or short.	Few negative of colon type. Positive: Good many bacilli of colon type; good many like colon but slightly longer; majority are bacilli like subtilis or megatherium with central spores; few bacilli of aerogenes morphology; a few bacilli more slender than colon and of varying lengths.

SUBJECT IV (O. F. L.).

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 7	Majority Gram negative. These are of colon type or slightly longer. Positive: A few large coccal and diplococcal bodies; a good many medium-sized diplococci; some bacilli of colon morphology; some longer than colon and more slender; some thick bacilli varying from aerogenes morphology to the length of colon.	Positive field: Good many medium-sized diplococci; majority are thick bacilli varying from colon length to aerogenes morphology, mostly of medium length; a few bacilli of subtilis type; some bacilli of colon morphology.	Positive field: Majority are thick bacilli of varying length, like those described in glucose sediment; some bacilli of colon length or longer, but more slender than colon; a few medium-sized diplococci.
July 10	Like last description	Positive field: Majority are medium-sized diplococci; remainder are thick bacilli varying from colon length to aerogenes morphology; mostly of medium length; some rather long threads.	Positive field: Good many small diplococci; a few bacilli of colon morphology; majority are rather thick bacilli, mostly of aerogenes morphology, some shorter and of medium length; some of the latter in short chains.
July 14	Like last description, except here are a few very long slender positive bacilli and a few large threads.	Positive field: Cocci as before; some of the thick bacilli are extremely long, twice aerogenes length.	Positive field: Majority are bacilli of colon morphology and some slightly longer and more slender; good many small diplococci; here and there a bacillus of subtilis morphology.

Results of Gram-stain tests on feces—Continued.

SUBJECT IV (O. F. L.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 17	Like last full description	Like last full description.	Negative bacilli of colon type, and some slender long bacilli. Positive: Some small diplococci; majority are thick bacilli, slightly heavier than aerogenes; most of them are long, others of medium length or short; a few have central spores; a few bacilli of colon morphology.
July 21–22	....do	Positive field: Field equally divided with medium-sized diplococci and large bacilli of various lengths; some of these are of aerogenes morphology, others short as colon or of medium length.	Positive field: Majority are thick bacilli, varying from colon length to aerogenes morphology, mostly of medium length; good many bacilli of colon length or longer, but more slender than colon; others of colon morphology; a few medium-sized diplococci.
July 24	Positive predominate. Negative are of colon type. Positive: Few large coccal and diplococcal bodies; good many medium-sized diplococci; some bacilli of colon morphology; good many slightly longer than colon and more slender or of colon thickness; a few of aerogenes morphology; a few of subtilis morphology.	Positive field: Good many medium-sized diplococci, mostly in chains; majority are thick bacilli varying in length from colon length to aerogenes morphology, but mostly of medium length.	Positive field: Some medium-sized diplococci; majority are rather thick bacilli like those on glucose medium; a few bacilli of medium length and thickness.
July 28	Like last description, except here are some bacilli of aerogenes morphology, but of medium length.	Positive field: Medium-sized diplococci in predominance; remainder are thick bacilli varying from colon length to aerogenes morphology, and some much longer, but mostly of medium length.	Positive field: Some medium-sized diplococci; majority are rather thick bacilli, as in last description of this sediment, but some of these have central spores and are occasionally in chains of two; some free spores.
July 31	Like last full description, except here are a good many large coccal bodies and a few free spores.	Positive field: Practically all are medium-sized diplococci, many in chains; a few of the thick bacilli mentioned in last sediment.	Positive field: Majority are bacilli that are rather thick, of aerogenes morphology and shorter; many of these have terminal bulgings, which in places show to be spores; a few chains of subtilis type; a few small diplococci.
Aug. 4	Like last full description	Positive field: Like last description.	Positive field: Like last description, plus some of colon morphology and some that are of medium length and slender.
Aug. 7	Like last full description except a few negative spirals here, few medium-sized diplococci, some large coccal bodies, some rather long thick threads.	Positive field: Diplococci of medium size in minority; thick bacilli of about aerogenes capsulatus type, but of varying length in predominance; some long slender threads.	Positive field: Some small and some medium-sized diplococci; good many bacilli of almost aerogenes diameter, mostly long, some in chains of 2 and 3, but mostly single; here and there these bacilli have terminal spores; many bacilli of colon morphology; no free spores.
Aug. 11	Few negative of colon type. Positive: A few large coccal and diplococcal bodies; good many medium-sized diplococci; here and there a long thick thread; some bacilli of aerogenes thickness or thicker and of medium length; some bacilli of colon morphology; many bacilli of medium length and thickness.	Positive field: Majority are medium-sized diplococci; some in chains; some bacilli of about aerogenes diameter or narrower perhaps, but of varying length; some very long, but mostly of medium length; some long thick threads.	Positive field: Few medium-sized diplococci; some bacilli of colon morphology; some bacilli of medium length and slender; here and there a chain of subtilis type; field full of thick bacilli of varying lengths, mostly of aerogenes length and morphology, others of medium length or short.

Results of Gram-stain tests on feces—Continued.

SUBJECT IV (O. F. L.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Aug. 14	Good many negative of colon type. Positive: Few medium-sized diplococci; otherwise same as last specimen.	Same as last description.	Positive field: Few medium-sized diplococci; good many long thick bacilli of aerogenes morphology, but with central and terminal spores; majority are medium length or long bacilli of medium thickness.
Aug. 18	Like Aug. 14, except a few negative spiral organisms; good many medium-sized diplococci.	....do....	Like last description plus some free spores.
Aug. 21	Few negative of colon type. Positive: A few large coccal bodies; good many medium-sized diplococci; a few long thick threads; some bacilli of colon morphology; some bacilli of aerogenes thickness and of medium length; bacilli of medium length and slender in majority.	....do....	Positive field: Some small and medium-sized diplococci; some bacilli of colon morphology; some bacilli of medium length and slender; field full of thick bacilli; some as very long threads; others of aerogenes length and approximating closely morphology of aerogenes; others short and of medium length.
Aug. 25	Like last description....	....do....	Positive field: Some medium-sized diplococci; majority are thick bacilli, varying from very short to very long, mostly of medium length; those of proper length look much like aerogenes; some rather long thin threads.
Aug. 28	Few negative of colon type. Positive: A few large coccal bodies; good many medium-sized diplococci; many medium length bacilli of slender diameter; some bacilli of colon morphology.	Positive field: Majority are medium-sized diplococci, many in chains; remainder are thick bacilli, some of aerogenes morphology; some much longer; most of them of medium length.	Positive field: A few medium-sized diplococci; some bacilli of colon morphology; some medium length slender bacilli; some of this morphology have enlargements or spores on end; great many rather stout bacilli, mostly of aerogenes morphology, but others of medium length or short.
Sept. 1	Picture like last description....	Positive field: Picture like last description, except that a few small diplococci were seen.	Positive field: Many bacilli of colon morphology; these and some slightly longer than colon are in majority; a few of aerogenes morphology; a few long thin threads.
Sept. 4	Positive predominate. Negative of colon type and a few spirals. Positive: Some large coccal bodies; good many medium-sized diplococci; a few bacilli of about subtilis morphology; here and there a free spore; good many bacilli of aerogenes morphology; majority are bacilli of colon morphology or slightly longer.	Positive field: Majority are medium-sized diplococci; some stout bacilli varying from short or medium-length to aerogenes morphology.	Positive field: Good many medium-sized diplococci; a few bacilli of colon morphology and some slightly longer than these; majority are rather thick bacilli, most of which are of aerogenes morphology; others short or of medium length; a large stout bacillus here and there.
Sept. 9	Picture like last description....	Like last description, except have here in addition some long rather stout threads.	Like last description, except that there are here more of the colon-like bacilli.
Sept. 12-13.	Like last description....	Like last description....	Positive field: Majority are bacilli of colon morphology; some medium-sized diplococci; some rather stout bacilli of aerogenes morphology or shorter.

Results of Gram-stain tests on feces—Continued.

SUBJECT IV (O. F. L.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Sept. 16	Gram positive and negative about equal. Negative of colon type. Positive: Some large coccal bodies; some medium-sized diplococci; majority are of colon type or longer; a few rather thick bacilli of aerogenes type; here and there one approximating subtilis in morphology; a few free spores.	Positive field: Practically all are medium-sized diplococci; a few rather thick medium length bacilli, simulating, except in length, the aerogenes.	Positive field: Good many bacilli of about colon morphology; good many bacilli of aerogenes capsulatus type; some like subtilis, but not in chains; a few medium-sized diplococci.
Sept. 19–20	Picture like that of last description	Positive field: Like last description, except some of these thick bacilli are very long.	Few negative bacilli of colon type; except for the addition of a few long thin threads, same picture as last description.
Sept. 23	Like last description. No spores; no organisms like subtilis.	Positive field: Medium-sized diplococci about in number equal to the bacilli present; these are of aerogenes morphology; others shorter or longer than typical	Negative bacilli of colon type predominate. Positive: Few medium-sized diplococci; majority of positive bacilli are thick, about aerogenes morphology, except that some have bulging central spores.
Sept. 26–27	Positive predominate. Negative of colon type. Positive: Good many medium-sized diplococci; few large coccal bodies; majority are bacilli of colon morphology or longer and slightly curved; a few stout and a few thin long threads; a few bacilli of aerogenes morphology; a few free spores.	Positive field: Practically all are medium-sized diplococci; some large diplococci; a few bacilli approaching aerogenes in morphology.	Positive field: Practically all are long stout bacilli or of medium length, a few with terminal spores; a few bacilli of colon morphology; a few medium-sized diplococci.
Sept. 30	Gram positive and negative about equal; negative of colon type; otherwise like last description.	Like last description	Positive field: Majority are medium length or long stout bacilli; some of aerogenes morphology; others with terminal oval or round spore; some of the latter look much like tetanus bacilli; good many slender medium length or long bacilli; a few of colon type; a few free spores.
Oct. 3–4	Picture like last examination	......do	Positive field: Majority are bacilli of colon morphology or longer; good many bacilli of aerogenes morphology; a few medium-sized diplococci.
Oct. 7	Picture like last examination, except that negative bacteria are few; these are of colon morphology and some spiral organisms.	Like last description, except here were found a few thick threads.	Positive field: Practically all are of colon morphology; some medium-sized diplococci; a few bacilli similar to aerogenes in morphology.
Oct. 10–11	Gram positive predominate. Negative are of colon type, a few spirals, and an occasional long slender partially decolorized bacillus. Positive: Few large coccal bodies, some medium-sized diplococci; majority are about colon morphology or slightly more slender; good many approximating aerogenes, but of varying thickness and length; few very stout medium length or long bacilli.	Positive field: Practically all are medium-sized diplococci; few rather stout bacilli of varying lengths, a few of which approximate aerogenes in morphology.	Positive field: Good many medium-sized diplococci; majority of bacilli are about colon morphology, or more slender; few bacilli approximating aerogenes in morphology.
Oct. 14	Like last description, except more large coccal and diplococcal bodies; few bacilli approximating aerogenes; few free spores.	Positive field: Like last description except bacilli are mostly longer than aerogenes, but of that diameter.	Positive field: Good many medium-sized diplococci, and some organisms which I can not be sure of, whether cocci in pairs or short bacilli; majority are rather thick bacilli of aerogenes diameter, but of various lengths, from colon length to typical aerogenes length, mostly of medium length.

Results of Gram-stain tests on feces—Continued.

SUBJECT IV (O. F. L.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Oct. 17–18	Few negative of colon morphology, occasional rather long bacilli of medium thickness, and a chain of spindle-shaped organisms. Positive: Few large coccal bodies; good many medium-sized diplococci; majority are bacilli of colon morphology, a few of which are slender and curved; some of colon morphology, but longer; some more slender than colon and longer; few of aerogenes type; few very thick, short bacilli.	Positive field: Majority are partially decolorized bacilli of colon morphology; good many medium-sized diplococci; few bacilli of aerogenes type, and a few more slender than typical.	Few negative of colon type. Positive: Good many medium-sized diplococci; many bacilli of colon morphology; few bacilli of aerogenes thickness, but varying from short to aerogenes length, mostly of medium length.
Oct. 22	Good many negative. These are of colon type, some longer than colon, and a few slender spirals. Positive: A few large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology, and some slightly longer than colon; good many like colon, but slightly longer and more slender; a few of these are slightly curved; a few of aerogenes morphology; a few more slender and shorter than aerogenes; an occasional large, thick bacillus of uncertain identity.	Positive field: Medium-sized diplococci much in predominance; some bacilli of almost aerogenes thickness and of medium length and short; here and there one of aerogenes morphology.	Few negative bacilli that are rather stout and of medium length. Positive: Good many bacilli of colon morphology; some like colon, but slightly longer, and some more slender and longer than colon; some bacilli of aerogenes morphology; good many bacilli more slender than aerogenes and varying in length, mostly of medium length; a few rather stout bacilli of subtilis or megatherium type.
Oct. 24–25	Like last description	Positive field: Practically all are medium-sized diplococci; here and there a bacillus of aerogenes morphology; a few more slender than aerogenes and of medium length and short.	Positive: Majority are bacilli of colon morphology and slightly longer than colon; a few medium-sized diplococci; here and there short, stout bacilli almost coccal in form; occasional free spores.
Oct. 28	do	Like last description	A few negative of colon morphology. Positive: Majority are medium-sized diplococci; some bacilli of colon morphology; good many bacilli more slender than aerogenes and of medium length; here and there a bacillus of aerogenes morphology.

SUBJECT V (A. M. N.).

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
July 4–5	Gram negative predominate. These are of colon type or slightly more slender and longer. Positive: Some large coccal bodies; some medium-sized diplococci; some bacilli of colon morphology; good many bacilli of medium length and slender; some short, stout bacilli and a few approximating aerogenes.	Positive field: Nearly all are medium-sized diplococci; a few medium length, slender bacilli.	Practically all are Gram negative of colon type; a few positive bacilli; these are thick bacilli, mostly short, but a few of aerogenes length. Some of the latter in short chains.
July 8	Gram positive predominate. Negative are of colon type and a few rather large, thick bacilli. Positive: Good many large coccal bodies; many medium-sized diplococci; majority are medium length and slender bacilli; some of colon morphology; a few bacilli of aerogenes morphology; here and there some large bacilli like subtilis in morphology.	Positive field: Very few medium-sized diplococci; field full of thick bacilli of aerogenes morphology or longer or shorter; some very long, thick threads.	Positive field; good many large bacilli of aerogenes type; some medium-sized cocci; some bacilli of colon morphology; majority are slender, medium-sized bacilli.
July 11–12	Picture of field like last description, except that negative bacilli predominate; these are of colon type or somewhat longer.	Positive field: Majority medium-sized diplococci; remainder are rather stout bacilli of medium length, approximating in places aerogenes in morphology.	Majority Gram negative. These of colon type. Positive: Some rather thick bacilli, varying from short to aerogenes morphology; a few slender bacilli of colon length or longer; here and there a few chains of subtilis morphology; some long narrow threads.

Results of Gram-stain tests on feces—Continued.

SUBJECT V (A. M. N.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 15	Gram positive predominate. Negative of colon type. Positive: Some large coccal bodies; good many medium-sized diplococci; good many bacilli of aerogenes type or shorter; good many bacilli of medium length or longer and slender; here and there a bacillus of subtilis morphology.	Positive field: Majority are medium-sized diplococci; many in chains; remainder are stout bacilli, mostly of medium length, others short, others of aerogenes morphology.	Positive field: Some medium-sized diplococci, a few in chains; majority are rather thick bacilli of medium length or short, or of aerogenes morphology; here and there bacilli of colon morphology.
July 18–19	Gram positive and negative about equal; negative of colon type; otherwise flora as in last examination.	Positive field: Majority are medium-sized diplococci; a few rather small cocci; some long, thick threads; stout bacilli as in last examination.	Same as last description.
July 22	Almost exclusively Gram positive; otherwise flora as in last description.	Positive field: Cocci of medium size and the stout bacilli mentioned in last examination about equally divided; some bacilli of colon morphology.	Positive field: Majority are medium length bacilli of medium thickness; good many rather thick, long bacilli having central spores, others short or of medium length; here and there free spores; a few bacilli of colon morphology.
July 25–26	Almost exclusively Gram positive. Gram neg. of colon type. Positive: Some large coccal bodies; some medium-sized diplococci; some rather thick bacilli of aerogenes type, and some shorter and of medium length; majority of the bacilli are of medium length and thickness; some of colon morphology.	Positive field: Majority are medium-sized diplococci; a few stout bacilli of aerogenes morphology or of medium length or short; some long, slender, and thick threads.	Positive field: Few medium-sized diplococci; majority are rather thick bacilli of medium length or short, others of aerogenes morphology; some long, thick threads.
July 29	Picture like that of last examination....	Like last description of this sediment.	Positive field: Few medium-sized diplococci; some bacilli of colon morphology. Majority are large, thick bacilli of about aerogenes morphology or longer; some of these have large or small oval terminal spores.
Aug. 1–2	Picture exactly like last description.....	Like last description....	Exactly similar to last description.
Aug. 5	Gram positive and negative about equal; negative of colon type; otherwise like last description	Exactly like last description.	Few negative of colon type. Positive: Many bacilli of medium length and thickness; good many of colon type; many long, thick bacilli of about aerogenes morphology, some of which have terminal oval or round spores.
Aug. 8–9	Gram positive predominate. Negative of colon type. Positive: Some large coccal bodies; good many medium-sized diplococci; few bacilli of aerogenes morphology; good many bacilli of medium length, or long and slender; some long, thick threads; occasional bacilli of subtilis morphology.	Positive field: Thick bacilli of various length as described before in these sediments, in predominance; medium-sized diplococci in minority.	Positive field: Majority are medium-sized diplococci; some small diplococci; a few thick bacilli of aerogenes thickness, varying in length from short bacilli to very long threads
Aug. 12	Gram positive almost exclusively. Excepting the few very long, slender bacilli mentioned among the gram positive in the last description this one tallies.	Positive field: Equally divided between medium-sized diplococci and the thick bacilli of various lengths.	Positive field: Few medium-sized diplococci; some bacilli of colon morphology; majority are thick bacilli of about aerogenes morphology or much longer; some of these long organisms can be described as threads; some of these shorter bacilli have terminal spores.

Results of Gram-stain tests on feces—Continued.

(SUBJECT V (A. M. N.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Aug. 15-16	Gram positive almost exclusively. Negative of colon type. Positive: Some large coccal bodies; some medium-sized diplococci; some bacilli of about subtilis morphology; some rather thick bacilli of aerogenes type and some shorter and of medium length; majority of bacilli are of medium length and medium thickness.	Positive field: Practically all are medium-sized diplococci, some in chains; remainder are stout bacilli of varying lengths, a few approximating aerogenes in morphology.	Positive field: Majority are bacilli of about colon morphology; some more slender and of medium length or a little longer; many long, thick bacilli of aerogenes morphology, except some of them have terminal oval spores; several chains of subtilis type; some medium-sized diplococci.
Aug. 19	Picture like last, except in addition there are some gram negative spirochete-like organisms, and there are relatively more of the stout bacilli approximating aerogenes.	Like last description....	Positive field: Good many medium-sized diplococci; good many of colon morphology; a few long, slender bacilli; here and there a short chain of subtilis type; majority are rather thick bacilli, mostly of medium length or short, others like aerogenes in morphology.
Aug. 22-	Gram positive and negative about equal. Negative are of colon morphology and some long, slender bacilli. Positive: Some large coccal bodies; a good many medium-sized diplococci; many thick bacilli of various lengths, some short, most of them medium length, some of aerogenes morphology, and some longer; a few large, stout bacilli of subtilis morphology; some of colon type; majority are bacilli of medium length and colon thickness.	....do..................	Like last description, except diplococci are more abundant and there are fewer of the stout bacilli approximating aerogenes in morphology.
Aug. 26	Like last description....................	.....do..................	Mixed gram positive and negative; many long thick bacilli partially decolorized. Positive: Majority are rather thick bacilli, a few showing central spores; many of these otherwise simulate aerogenes in morphology, although they are rather short; some single bacilli even stouter than the above, and look much like subtilis in morphology, although they are not in chains.
Aug. 29-30	.....do..............................	.....do..................	Positive field: Majority are bacilli of medium length and thickness: some nearly of colon morphology; a few chains of subtilis type with central spores; some rather thick bacilli of aerogenes morphology, others longer, some shorter, and a few medium-sized diplococci.
Sept. 2	Gram positive almost exclusively, otherwise like description of Aug. 22 and 23.	.....do..................	Positive field: Many bacilli of medium length and thickness, some nearly of colon morphology; great many rather thick bacilli, very few of aerogenes type, mostly short; some medium-sized diplococci.
Sept. 5, 6, 7.	Positive predominate. Negative are of colon type or slightly longer and slender, and a few spirochete-like organisms. Positive: Majority are slender bacilli of colon morphology or longer; some large coccal bodies; good many medium-sized diplococci; a few bacilli of aerogenes type or longer than typical; a few free spores.	.....do..................	Few negative bacilli of colon type or longer. Positive: Good many medium-sized diplococci; some chains of subtilis morphology; some bacilli of aerogenes morphology, others shorter than these; majority are bacilli of colon morphology or slightly longer.

Results of Gram-stain tests on feces—Continued.

SUBJECT V (A. M. N.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Sept. 10	Like last description, except no spirochete-like negative organisms seen.	Like last description....	Positive field: Some medium-sized diplococci; good many of colon morphology or little longer; some very long, slender bacilli; good many stout bacilli, many of aerogenes morphology, others of greater or lesser lengths; few short chains of subtilis morphology.
Sept. 14	Like last description....................	.....do....................	Positive predominate. Negative are of colon type, but slightly longer. Positive: Majority are bacilli of colon type or longer; some medium-sized diplococci; a few rather thick bacilli of aerogenes morphology, and more of same thickness but shorter.
Sept. 17	Gram positive predominate. Negative of colon type. Positive: Good many large coccal and diplococcal bodies; many medium-sized diplococci; majority are bacilli of about colon morphology; a few of aerogenes type; a few bacilli of a morphology like that of subtilis.	.....do....................	Positive field: Field full of bacilli in chains of subtilis type; a few bacilli of colon type; a few medium-sized diplococci.
Sept. 21	Like last description; one long negative stout bacillus found.	Positive field. Field equally divided between medium-sized diplococci and short bacilli of aerogenes diameter.	Very few negative of colon type. Positive: Majority are bacilli of colon morphology; good many short, thick bacilli, and a few about aerogenes morphology; some medium-sized diplococci.
Sept. 24	Gram positive and negative about equal; negative of colon type and some long, slender bacilli. Positive: Good many large coccal and diplococcal bodies; many medium-sized diplococci; good many bacilli of colon type; some longer and more slender than colon; a few of aerogenes type; a few short bacilli much shorter than aerogenes.	Positive and negative about equal; negative are of colon type and some much longer and slender. Positive: Many medium sized diplococci; some thick bacilli that are of ærogenes morphology in places, but mostly shorter than aerogenes.	Good many negative: These are of colon type: Some slightly longer and some much longer, even to formation of threads. Positive: A few long threads; some bacilli of colon type and a few longer: many rather thick bacilli of aerogenes type.
Sept. 28	Gram positive almost exclusively; good many large coccal bodies—considerable medium-sized diplococci; majority are bacilli of colon morphology or a little longer than colon, some staining irregularly; a few bacilli of aerogenes morphology; some large oval bacilli, a few with central spore.	Positive field: Medium-sized diplococci are in minority; majority are bacilli of colon morphology, and many distinctly longer than colon, some slightly curved and pointed on the ends; a few bacilli of aerogenes morphology or shorter than typical.	Positive field. Majority are bacilli of colon morphology and many much longer; some of the latter show irregularity in staining and headlets; good many medium-sized diplococci; few of aerogenes type.
Oct. 1	Flora as on Sept. 28....................	Positive field: Medium-sized diplococci much in predominance; some rather stout bacilli of about aerogenes morphology, but varying in length.	Flora like Sept. 28, except no headlet bacteria were seen.
Oct. 5	Almost exclusively gram positive; good many large coccal bodies; very many medium-sized diplococci; bacilli of colon morphology or little longer in predominance; a few bacilli of aerogenes type; a few large bacilli, somewhat oval, with occasional central spore.	Positive field: Practically all are medium-sized diplococci; a few stout bacilli of varying lengths, some approximating aerogenes in morphology.	Positive field. Bacilli of colon morphology or slightly longer and more slender in predominance; some of the slender bacilli show irregularity in the gram stain, and a few structures like headlets were seen here and there; a few slender bacilli with terminal spores.

Results of Gram-stain tests on feces—Continued.

SUBJECT V (A. M. N.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908.			
Oct. 8	Few negative bacilli of colon type. Positive: A good many large coccal bodies; medium-sized diplococci much in predominance; a good many bacilli of colon morphology; some bacilli much longer than colon, a few of which show irregularity of staining; few bacilli of aerogenes type; a few large oval bacilli.	Positive field: Almost exclusively medium-sized diplococci; a few stout bacilli of lengths varying from medium to long; a few of these are similar to aerogenes.	Positive field. Picture like that of Oct. 5th.
Oct. 12	Few negative. These are of colon type or slightly longer, and a few long, slender bacilli. Positive: Few large coccal bodies; good many medium-sized diplococci; majority are of colon length or slightly longer, but more slender than colon; few of aerogenes type; few free spores; few large stout bacilli containing spores.	Like last description, plus some long threads of medium thickness, a few of which are gram positive and some gram negative.	Few negative bacilli slightly longer than colon; majority are medium sized diplococci; good many bacilli of colon morphology; good many of colon morphology, but slightly longer; here and there one of aerogenes type.
Oct. 15	Like last description	Like last full description.	Positive field: Good many medium-sized diplococci; good many of colon type and some slightly longer; majority are large bacilli of aerogenes thickness, of ærogenes length and shorter, but not of typical appearance, mostly single, but a few in chains of 2 to 4.
Oct. 19	Few negative of colon type and some slightly longer. A few rather thick medium length bacilli. Positive: A few large coccal bodies; good many medium sized diplococci; good many bacilli of colon morphology, or slightly longer, but more slender than colon; some of colon morphology, and some slightly longer than these; some bacilli of aerogenes morphology, some somewhat shorter; a few of aerogenes morphology, but more slender.	....do	Positive field: Good many medium-sized diplococci; good many of colon morphology; good many similar to colon but more slender; majority are bacilli of almost aerogenes thickness, mostly of medium length, a few short, and a few of aerogenes length.
Oct. 22	Like last smear, plus a few free spores	....do	Like last sediment, except fewer colon and fewer of those more slender than colon.
Oct. 26	Like last smear, plus a few very long and very thick bacilli of unknown identity.	....do	Majority are negative diplococci, or very short, plump bacilli(?). Few negative of colon morphology. Positive: Great many bacilli more slender than aerogenes but of aerogenes lengths; a few bacilli in chains with central spores like subtilis.
Oct. 29	Good many negative of colon type and slightly longer than colon. Positive predominate; good many medium sized diplococci; a few large coccal bodies; good many bacilli of colon morphology; a few bacilli of colon morphology, but longer; good many bacilli of colon morphology, but more slender and longer; a few of these show irregular granular staining; few of aerogenes morphology; few more slender than aerogenes. Occasional free spores; here and there a very long, thick bacillus of unknown identity.	....do	Good many negative bacilli of colon morphology. Positive: Majority are bacilli of colon morphology; some similar but slightly longer; some medium sized diplococci; a few very long threads.

Results of Gram-stain tests on feces—Continued.

SUBJECT VI (C. H. S.).

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 4–5	Negative predominate. These are of colon type and longer, and a good many long slender bacilli. Positive: Some large coccal bodies; majority are medium sized diplococci; some of colon morphology; many bacilli of medium length and slender; a few of aerogenes morphology; occasional bacilli like subtilis.	Positive field: Majority are medium sized diplococci; remainder are thick bacilli varying from colon length to morphology of aerogenes; majority of these are of medium length; here and there a large bacillus of subtilis morphology; some very long, thick threads.	Gram negative few. These of colon type. Positive: A few medium sized diplococci; some bacilli of colon morphology; good many bacilli of subtilis type with central spore; many bacilli of aerogenes thickness but of medium length.
July 8	Positive predominate. Positive: Some large coccal bodies; many medium sized diplococci; majority of bacilli are of colon morphology, but longer; some of colon morphology; good many stout bacilli varying from colon length to aerogenes morphology.	Positive field: Many medium-sized diplococci; remainder are large, thick bacilli of medium length, some of aerogenes morphology, and some longer.	Positive field: Majority are large bacilli of aerogenes morphology; some medium-sized diplococci; here and there bacilli of colon morphology.
July 11–12	Gram positive and negative about equal. Negative are of colon type or slightly longer. Positive: A few large coccal bodies; many medium-sized diplococci; majority are bacilli of colon morphology or slightly longer; good many stout bacilli of aerogenes type, but varying much in length from short to long.	Positive field: Picture as on July 8.	Positive field: Majority are bacilli of aerogenes morphology or shorter; some medium-sized diplococci; some of colon morphology, and some longer than colon.
July 15	Positive and negative about equal. Negative are of colon type or slightly longer, and a few stout bacilli like aerogenes in morphology. Positive organisms like those described on 11th and 12th.	Positive field: Cocci in diplococcal form predominate; some stout bacilli varying from short to very long; some of the intermediate length are of aerogenes morphology.	Positive field: Majority are rather slender, long bacilli; some of these have bulbous extremity, and some have termina spore; in places, these bacilli look much like tetanus; good many bacilli of colon morphology and some slightly longer; a few medium-sized diplococci.
July 18–19	Few negative of colon morphology. Positive: Some large coccal bodies; many medium-sized diplococci; majority of bacilli are of colon morphology or longer; some rather stout bacilli varying from short organisms to about aerogenes morphology.	Positive field: Medium-sized diplococci, many in chains, predominate; the remainder are thick bacilli mostly of colon length or medium length, a few about aerogenes morphology; here and there a long thick thread.	Positive field: Majority are rather slender, long bacilli; some have termina spores; good many ba cilli of colon morphology and some longer; a good many medium-sized diplococci; some bacilli of subtilis type; a few free spores.
July 22	Few Gram negative. These of colon type, and some long slender bacilli. Positive: Some large coccal bodies; many medium-sized diplococci; most of bacilli are of colon morphology or longer; good many stout bacilli of aerogenes morphology, but of varying length; a few long thick threads.	Picture as July 18 and 19, excepting no threads.	Positive field: Majority are rather thick bacilli varying from colon length to aerogenes, mostly of medium length; here and there some of these have central spores; a few free spores; a few slender bacilli with terminal oval or round spore; a few of colon morphology; some medium-sized diplococci.
July 25, 26	Gram positive and negative about equal. Negative organisms as in day before (22d). Positive organisms as on 22d; some free spores in addition.	Positive field: Medium-sized diplococci in minority; thick bacilli of aerogenes morphology, or shorter, predominate.	Positive field: Majority are rather thick bacilli varying from colon length to aerogenes, mostly of medium length; very few free spores; a few slender bacilli with terminal spore; a few of colon morphology; some medium-sized diplococci; a few chains of subtilis variety.

Results of Gram-stain tests on feces—Continued.

SUBJECT VI (C. H. S.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. July 29	Picture like that of 25th and 26th	Positive field: Two kinds of organisms; cocci and thick bacilli as on 25th and 26th; both present in about same number.	Positive field: Majority are stout bacilli; some of aerogenes morphology, others shorter; here and there some of these have central spores; few slender bacilli of medium length with terminal spore; some medium-sized diplococci; few bacilli of colon type; some chains of subtilis type.
Aug. 1, 2	Majority Gram positive; a few large coccal bodies; good many medium-sized diplococci; good many bacilli of about colon morphology, some slightly curved, and some longer and more slender; a few bacilli of aerogenes type, but varying in length; here and there a thick long bacillus with central spore; occasional free spores.	Positive field: Majority are medium-sized diplococci; some in chains; remainder are stout bacilli, some of aerogenes morphology, others shorter or much longer; some rather long threads.	Positive and negative mixed. Few negative. These are very long slender bacilli which are decolorized in places in the field and not in others. Positive: Majority are thick bacilli, some of aerogenes morphology, others of medium length or short; a few medium-sized diplococci.
Aug. 5	Few negative. These are of colon type or little longer. Positive: Some large coccal bodies; good many medium-sized diplococci; majority are slender bacilli longer than colon morphology, some of which are slightly curved; a few stout bacilli as on Aug. 1 and 2; a few free spores; a few large thick bacilli.	Positive as on Aug. 1 and 2.	Positive field: Majority are of colon morphology; some bacilli in chains of subtilis type; a few diplococci.
Aug. 8, 9	Picture here as on Aug. 5, except more diplococci and fewer of those described as of colon type, but longer.	Positive field, as on last examination.	Positive field: Good many bacilli of colon morphology; many bacilli of colon morphology, but longer; many rather long and thick single bacilli, some with central spores; good many free spores.
Aug. 12	Few negative of colon type. Positive: Some large coccal bodies; good many medium-sized diplococci; majority are slender bacilli, longer than colon; good many of colon morphology, some of which are slightly curved; very many stout bacilli approximating aerogenes; no spores.	do	Positive field: Many long, slender bacilli; good many of colon morphology; good many free spores; good many bacilli of aerogenes morphology, and others of same diameter, but of medium length or short.
Aug. 15, 16	Few Gram negative; these of colon type or a little longer; some large coccal bodies; many medium-sized diplococci; good many slender bacilli of colon length or longer, some slightly curved; a few stout bacilli with central spore; a few free spores; few of aerogenes morphology.	Positive field: Cocci of medium size in diplococcus form and large stout bacilli, some of aerogenes morphology, others shorter or longer in about equal number.	Positive field: Many long, slender bacilli, and many in long threads; good many of colon morphology; good many free spores; good many of aerogenes morphology, and others of same thickness, but shorter.
Aug. 19	Few Gram negative, these of colon type or slightly longer. Positive: Organisms are like those of last examination, except that the medium-sized diplococci are in predominance.	Positive field: Majority are medium-sized diplococci; few bacilli of colon morphology; few stout bacilli, some of aerogenes morphology, others shorter or much longer.	Positive field: Many bacilli of colon morphology; some rather long, slender bacilli, a few of which have terminal spores; some bacilli of aerogenes morphology; some bacilli of morphology of bacillus subtilis; a few medium-sized diplococci.
Aug. 22, 23	Description of field coincides with that of last examination.	Positive field: Majority are medium-sized diplococci, a few in chains; remainder are bacilli of aerogenes morphology, and some shorter or longer than these; a few long, thick threads.	Positive field (very poor slide): Majority are medium-sized diplococci; some rather short, thick bacilli.

Results of Gram-stain tests on feces—Continued.

SUBJECT VI (C. H. S.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Aug. 26	Gram positive predominate. Negative are of colon type. Positive: Some large coccal bodies; good many medium-sized diplococci; good many bacilli of colon morphology, and many somewhat longer; good many rather thick bacilli of various lengths, some of aerogenes morphology, but more of medium length or short; here and there a free spore.	Positive field: Almost exclusively medium-sized diplococci; remainder are rather thick bacilli, varying from about medium length to long threads, very few of aerogenes morphology.	Negative are in minority, and are very long, slender bacilli. Positive: In places bacilli of the above morphology are not decolorized, and some of them show slight terminal enlargements; these positive and negative bacilli predominate in the field; good many rather stout bacilli, varying from short length to about aerogenes morphology; good many medium-sized diplococci; some bacilli of colon morphology.
Aug. 29, 30	Description of field exactly like that of last examination.	Flora like last examination.	Positive field: Some bacilli of colon morphology; a few medium-sized diplococci.
Sept. 2	Flora here like the last description, except that there are more diplococci and fewer of those bacilli that are stout and of various lengths.	Flora like last description, except that many of the diplococci are in chains.	Positive field: A few bacilli of colon type; few medium-sized diplococci; a few of aerogenes type; a few bacilli in chains with central spores of subtilis morphology; majority are long, rather slender bacilli and some long slender threads.
Sept. 5–7	Gram positive predominate; flora here like in last examination, except that there are fewer diplococci, but still a good many, and that there are more of those bacilli that are stout and of various lengths.	Flora like that of last description, except that there are no chains of diplococci and no long threads.	A few negative bacilli of colon type. Positive: Majority are rather long, slender bacilli; some rather long slender threads; good many of colon morphology; some bacilli of subtilis type, but not in chains.
Sept. 10	Gram positive predominate; negative are of colon type and some long, slender threads. Positive: Some large coccal bodies; good many medium-sized diplococci; good many bacilli of colon morphology and many somewhat longer; good many bacilli of about aerogenes morphology, others like these, but stouter (?); some large bacilli of subtilis morphology; some long slender threads; a few free spores.	Positive field: Majority are medium-sized diplococci; remainder are thick bacilli, mostly about aerogenes morphology, others very long, medium length or short; a single free spore seen.	Few very long negative thread-like bacilli. Positive: Some medium-sized diplococci; good many bacilli of aerogenes morphology or shorter, some of the latter with central spores; no chains; a few rather long slender bacilli with terminal spore; majority are bacilli of about colon morphology or longer; a few free spores.
Sept. 14	Positive predominate. Negative of colon type. Positive: Some large coccal bodies; good many medium-sized diplococci; good many bacilli of colon morphology and many somewhat longer; good many rather thick bacilli of varying lengths, some of aerogenes morphology, others of medium length or short; a few free spores.	Like last examination...	Positive predominate. Very few negative of a morphology like colon, except longer. Positive: Majority are bacilli of colon morphology or longer; some medium sized diplococci; good many stout bacilli of aerogenes morphology, others shorter.
Sept. 17	Positive predominate. Negative of colon type. Positive: Majority are slender bacilli of colon type or longer; a few large coccal bodies; some medium-sized diplococci; few of aerogenes type; some short thick bacilli of uncertain morphology; a few spore holding bacilli like subtilis in morphology; a few free spores.	.....do..................	Positive and negative about equal. Negative are of colon type, and many long slender baccilli. Positive: Some very long bacilli like those above; good many bacilli of about aerogenes morphology; few of colon type; good many medium-sized diplococci.

Results of Gram-stain tests on feces—Continued.

SUBJECT VI (C. H. S.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Sept. 21	Like last examination, except some negative spirochete-like spiral organisms; a few very long thick bacilli partially decolorized.	Like last examination..	Positive field: Good many bacilli of colon type; good many rather thick bacilli of various lengths, some of aerogenes morphology, and some with terminal spore; some medium-sized diplococci.
Sept. 24	Gram positive predominate. Negative of colon type. Positive: Majority are slender bacilli of colon type or slightly longer, some of the latter curved; a few large coccal bodies; some medium-sized diplococci; here and there a free spore; few of aerogenes morphology; some short thick bacilli.	Positive field: Practically all are medium-sized diplococci; a few thick bacilli of varying lengths.	Positive field: Majority are bacilli of colon morphology; good many medium-sized diplococci; few of aerogenes type; a few short thick bacilli; here and there a long slender thread.
Sept. 28	Practically Gram positive field; a few large diplococcal bodies; good many medium-sized diplococci; good many bacilli of colon morphology; good many bacilli longer than colon, some of which are slightly curved; good many stout bacilli varying in length from short to about aerogenes morphology; few free spores.	Positive field: Nearly all are medium-sized diplococci; few rather stout bacilli of medium length.	Positive field: Majority are bacilli of colon morphology; goodly number of bacilli longer than colon; few medium-sized diplococci; a few bacilli with round spore similar to tetanus; good many stout medium length spore holding bacilli; here and there a free spore.
Oct. 1	Few Gram negative bacilli. These of colon type. Positive: A few large coccal bodies; good many medium-sized diplococci; a few rather long threads; good many bacilli of colon morphology, and a good many longer than colon, some of the latter slightly curved; good many stout bacilli of aerogenes length or shorter; a few free spores.	Positive field: Nearly all are medium-sized diplococci; some very long stout bacilli, singly or in chains of 2 to 3.	Few Gram negative. These of colon type. Positive: Majority are bacilli of colon morphology or longer than typical colon, some of the latter staining irregularly gram positive; a few medium-sized diplococci; a few rather long thick bacilli, some of which have terminal spores.
Oct. 5	Picture like that of October 1...........	Positive field: Nearly pure culture of medium-sized diplococci; few stout bacilli varying from short to very long.	Very few Gram negative. These of colon type. Positive: Majority are bacilli of colon morphology or slightly longer, some of the latter showing irregularity in staining; a few medium-sized diplococci; some rather thick medium length bacilli with terminal and central spores.
Oct. 8	....	Positive field: Practically all are medium-sized diplococci; remainder are stout bacilli, some of aerogenes morphology, others of medium length or very long.	Positive field: Few Gram negative bacilli of colon type. Positive: Bacilli and cocci as Oct. 5, except here we have in addition a good many very long slender bacilli or threads.
Oct. 12	Few negative of colon type and slightly longer. Positive: Few large coccal bodies; good many medium-sized diplococci; good many bacilli of colon morphology; good many slightly longer than colon; some of colon length but more slender and curved; good many bacilli of aerogenes type and some shorter than these; few large thick bacilli with central spore; few free spores.	Like last description....	Positive field: Good many medium-sized diplococci; good many of colon morphology; good many like colon but slightly longer and more slender; some of the larger ones stain irregularly Gram positive; good many of aerogenes type and shorter than these.
Oct. 15	Like last description....................	.....do.....................	Positive field: Good many medium-sized diplococci; good many of colon morphology; few long slender bacilli, of which part have terminal spores; good many bacilli of aerogenes thickness, mostly short; a few spore-holding single bacilli resembling subtilis.

Results of Gram-stain tests on feces—Continued.

SUBJECT VI (C. H. S.)—Continued.

Date.	Gram stain direct.	Gram stain of glucose tube sediment.	Gram stain of bouillon tube sediment.
1908. Oct. 19	Few negative bacilli of colon type and slightly longer than colon. Positive: Few large coccal bodies; good many medium-sized diplococci; good many bacilli of colon morphology; good many bacilli of colon morphology, but slightly longer; good many medium length or short slender bacilli; 1 headlet form seen on long slender bacillus; a few of aerogenes morphology; some more slender than aerogenes and of medium length or short, a few free spores.	Positive field: Like last description; stout bacilli described as more slender than aerogenes	Positive field: Good many medium-sized diplococci; good many bacilli of colon morphology; good many of colon morphology but more slender; majority are bacilli of almost aerogenes thickness, mostly of medium length, few short and few of aerogenes length.
Oct. 22	Few negative bacilli of colon type, and slightly longer. Positive: Few large coccal bodies; some medium-sized diplococci; good many of colon morphology; a few of colon morphology but slightly thicker; good many of colon morphology, but longer, a few of which are slightly curved; some bacilli of aerogenes type; some of about same morphology but shorter; a few long thick bacilli with occasional central spores; a few free spores.	Positive field, equally divided between medium-sized diplococci and bacilli of aerogenes thickness but of varying lengths; majority medium, others as long as or longer than aerogenes.	Positive field: A few medium-sized diplococci; a few bacilli of colon morphology; majority are bacilli more slender than aerogenes and mostly of medium length, some short, others long; here and there very short stout bacilli; a few free spores.
Oct. 26	Negative organisms in abundance but in minority: These are of colon morphology and slightly longer, and a few bacilli long and slender and a few spirals. Positive: Organisms as in last description.	Positive field: Practically all are medium-sized diplococci; a few bacilli more slender than aerogenes and varying in length from short to very long.	Few negative of colon morphology except longer. Positive: Majority are medium - sized diplococci; good many bacilli of colon morphology but longer; a few of colon morphology. Here and there bacilli in chains of subtilis type; some free spores; few slender long bacilli with terminal oval spore; occasional bacilli of aerogenes thickness but shorter than aerogenes.
Oct. 29	Good many Gram negative. These are of colon type, some slightly longer, and here and there a very long slender bacillus. Positive: Few large coccal bodies; good many medium-sized diplococci; a few of colon morphology, and a few slightly longer than these; good many of colon morphology but slightly thicker than colon; some bacilli of aerogenes morphology and some shorter than aerogenes; a few long, thick bacilli of unknown identity; occasional free spores.	Like last description....	Positive field: Good many medium-sized diplococci a few bacilli of colon morphology; majority of organisms are of almos aerogenes thickness and of medium length or short; a few approximating aerogenes in morphology.

MEDICAL CONTROL.

Through the whole of the four months the men on the squad were kept under close observation by Doctor Buhlig, who, in addition to the bacteriological work just recorded, made certain routine clinical tests. Once a month a thorough examination of each subject was made by Doctor Buhlig personally, and daily clinical observations were carried out by two of the members of the squad on themselves and their colleagues. These two men were senior medical students, and their work was always done under the direction of Doctor Buhlig.

The first set of the tables following contains the results of the monthly examination. The daily records are presented next, and taken all together they give a very good picture of the general condition of the men throughout the four months. Comments will be made later on the results.

Monthly medical report.

SUBJECT I (H. N. B.).

	July 3.	Aug. 3.	Sept. 8.	Oct. 6.	Oct. 31.
Heart	Negative	Negative	Negative	Negative except reduplication of 2d pulmonic.	Negative.
Pulse	72	72	78	72	72.
Character of pulse	Full, regular	Full, regular	Full, regular	Full, regular	Full, regular.
Temperature	98.6	98	98	98	98.4.
Respiration	18	15	18	20	16.
Lungs	Distinct fremitus over right apex, otherwise negative.	Negative	Some roughened breathing over right apex, otherwise negative.	Negative	Negative.
Liver	Not palpable	Not palpable, negative.	Negative	do	Do.
Spleen	do	Not palpable	do	do	Do.
Abdomen	Negative (very difficult to examine, very rigid).	Negative	do	do	Do.
Lymph nodes	Negative	do	do	do	Do.
Thyroid	do	do	do	do	Do.
Throat and nose	do	do	Throat red but not sore, negative.	do	Do.
Reflexes	Brisk	Brisk	Brisk	Brisk	Brisk.

SUBJECT II (W. W. C.).

	July 2.	Aug. 4.	Sept. 8.	Oct. 7.	Oct. 31.
Heart	Negative	Negative	Negative	Negative	Negative.
Pulse	72	84	72	64	72.
Character of pulse	Full, regular	Full, regular	Full, regular	Full, regular	Full, regular.
Temperature	99	98.6	98.2	98.4	99.
Respiration	15	15	16	13	16.
Lungs	Negative	Negative	Negative	Negative	Negative.
Liver	Not palpable	Negative; not palpable.	do	do	Do.
Spleen	do	Not palpable	do	do	Do.
Abdomen	Negative	Negative	do	do	Do.
Lymph nodes	Negative, except slightly enlarged inguinal.	Negative, except slight enlarged inguinal.	do	do	Do.
Thyroid	Negative	Negative	do	do	Do.
Nose and throat	Septum spur, negative.	do	do	do	Slight redness; otherwise negative.
Reflexes	Brisk	Brisk	Brisk	Brisk	Normal.

Monthly medical report—Continued.

SUBJECT III (A. G.).

	June 30.	Aug. 3.	Sept. 8.	Oct. 6.	Oct. 31.
Heart	Negative	Negative	Negative	Negative	Negative.
Pulse	84	76	66	72	72.
Character of pulse.	Small, regular; irregular on standing.	Full, regular	Full, regular	Full, regular	Full, regular.
Temperature	99.2	98.2	98.6	99.4	98.6.
Respiration	15	18	18	15	18.
Lungs	Negative	Negative	Negative	Negative	Negative.
Liver	Easily palpable.	Slightly palpable; negative.	Palpable, not tender; percussion negative.	Slightly palpable; percussion negative.	Negative, palpable (?).
Spleen	Not palpable	Not palpable	Negative	Negative	Negative.
Abdomen	Negative	Negative	do	do	Do.
Lymph nodes	do	do	do	do	Do.
Thyroid	Somewhat prominent.	Not very prominent.	Somewhat prominent.	do	Do.
Nose and throat.	Deviated septum; spur on septum; enlarged turbinates; otherwise negative.	Throat red; otherwise same as June 30.	Negative	Throat reddened only.	Reddened pharynx; otherwise negative.
Reflexes	Very active	Brisk	Brisk	Brisk	Brisk.

SUBJECT IV (O. F. L.).

	July 6.	Aug. 3.	Sept. 8.	Oct. 6.	Oct. 31.
Heart	Faint systolic blow over apex; otherwise normal.	Faint systolic blow at apex; heart slightly to right; otherwise normal.	Negative	Negative, except precordial area slightly to right.	Negative.
Pulse	80	60	66	72	66.
Character of pulse.	Full, regular	Full, regular	Full, regular	Full, regular	Full, regular.
Temperature	98.8	98.3	98.2	98.2	98.8.
Respiration	8	7	6	7	8.
Lungs	Slight dullness over right apex; fremitus(?) over apex; otherwise negative.	Slight dullness over right apex; roughened breathing there; no fremitus or rales.	Roughened breath sounds over right apex; occasional rales(?); otherwise negative.	Negative, except right apex shows slight dullness and increased breath sounds.	Slight tactile fremitus over right apex; otherwise negative.
Liver	Easily palpable.	Slightly palpable; negative.	Palpable; not tender; percussion, negative.	Palpable; otherwise negative.	Negative.
Spleen	Not palpable	Negative	Negative	Negative	Do.
Abdomen	Negative	do	do	do	Do.
Lymph nodes	do	do	do	do	Do.
Thyroid	do	do	do	do	Do.
Nose and throat.	Left large turbinate; otherwise negative.		Throat red and slightly swollen this a. m.; otherwise negative.	do	Slightly enlarged red follicles on posterior pharynx; otherwise negative.
Reflexes	Normal	Normal	Present; normal.	Normal	Normal.

Monthly medical report—Continued.

SUBJECT V (A. M. N.).

	July 1.	Aug. 4.	Sept. 8.	Oct. 6.	Oct. 31.
Heart	Slight systolic murmur at pulmonic area; reduplication of second sound; otherwise negative.	Negative, except slight reduplication of second pulmonic.	Negative, except for reduplication of the second pulmonic.	Negative, except for reduplication of the second pulmonic.	Negative, except for reduplication of the second pulmonic.
Pulse	60	72	76	68	72.
Character of pulse.	Full, regular	Full, regular	Full, regular	Full, regular	Full, regular.
Temperature	98.4	98.2	98.6	98.4	98.8.
Respiration	18	16	18	18	16.
Lungs	Negative	Negative	Negative	Negative	Negative.
Liver	Not palpable	do	do	do	Do.
Spleen	do	do	do	do	Do.
Abdomen	Negative	do	do	do	Do.
Lymph nodes	do	do	do	do	Do.
Thyroid	do	do	do	do	Do.
Nose and throat.	Right enlarged inferior turbinate; otherwise negative.		do	do	Do.
Reflexes	Normal	Normal	Normal	Brisk	Brisk.

SUBJECT VI (C. H. S.).

	July 6.	Aug. 3.	Sept. 8.	Oct. 6.	Oct. 31.
Heart	Negative	Negative, except reduplication of second pulmonic.	Negative	Negative	Negative.
Pulse	84	68	72	66	80.
Character of pulse.	Small, regular	Small, regular.	Small, regular	Small, regular	Small, regular.
Temperature	99.4	98	98	98.2	98.4.
Respiration	14	15	14	21	18.
Lungs	Negative	Negative	Negative	Negative	Negative.
Liver	Palpable; not tender.	Not palpable; negative.	Palpable; percussion negative.	do	Slightly palpable, not tender; otherwise negative.
Spleen	Not palpable	Negative	Negative	do	Negative.
Abdomen	Negative	do	do	do	Do.
Lymph nodes	do	do	do	do	Do.
Thyroid	do	do	Negative; slightly prominent.	do	Do.
Nose and throat.	Large turbinates both sides; otherwise negative.	Throat negative.	Throat reddened; otherwise negative.	Throat reddened, hyperemic.	Do.
Reflexes	Normal	Normal	Normal	Subdued	Brisk.

Daily medical record.

SUBJECT I (H. N. B.).

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
1908.	*Kilogms.*											*Movements.*	
July 1	65.9	......	......	70	78	......	98.0	......	18	Moderate, anatomical laboratory.	Cloudy, damp	......	Perfectly well.
2	65.55	......	......	72	68	......	97.8	......	18	.....do	Bright, warm	One b. m., solid	Do.
3	65.8	80	84	70	84	97.8	98.0	17	24	.....do	Rain	One soft	Do.
4	65.55	88	92	80	88	97.8	97.8	20	24	.....do	Bright, warm	Two soft	Do.
5	64.83	......	......	84	88	......	98.0	......	20	None	Bright, hot	Three soft	Do.
6	......	......	......	......	......	......	......	......	......	......	......	......	Absent part of day; record not kept.
7	64.3	78	86	78	84	98.4	97.8	24	22	Hard, anatomical laboratory.	Cloudy, cool	One soft	Perfectly well.
8	65.3	72	78	74	80	97.8	97.8	18	20	.....do	Bright, warm	Two soft	Do.
9	64.43	78	84	72	78	98.4	98.2	20	24	.....do	.....do	.....do	Do.
10	65.0	74	80	72	80	98.0	97.8	22	24	.....do	.....do	.....do	Has dermatitis on bearded part of face; shaved in barber shop day previous; well.
11	64.1	84	86	74	80	98.4	98.0	22	24	Moderate, anatomical laboratory.	Bright, hot	One soft	Well; dermatitis disappearing.
12	64.3	72	76	72	78	98.6	98.4	20	22	Rest day	.....do	.....do	Do.
13	64.2	78	84	72	78	98.4	98.2	24	18	Hard, anatomical laboratory.	Cloudy, hot	.....do	Well; dermatitis gone.
14	64.2	72	80	72	76	97.8	98.0	20	20	.....do	Bright, hot	One hard	Well; acne eruption on both legs; no inconvenience.
15	64.9	72	80	76	80	98.2	98.2	18	18	.....do	Bright, warm	Two soft	Well; acne as before.
16	65.1	72	76	72	78	98.0	98.2	18	20	.....do	Rain, warm	One soft	Well; acne on legs.
17	64.8	72	80	76	80	98.2	98.4	18	18	.....do	Cloudy, warm	.....do	Well; acne disappearing.
18	65.0	78	84	74	84	98.2	98.2	18	18	.....do	Cloudy, cool	One soft, one hard	Well; acne disappeared.
19	64.8	76	82	78	84	98.0	98.0	20	19	Rest day	Bright, warm	Two hard, one soft	Do.
20	64.8	80	88	80	86	98.0	98.2	20	22	Anatomical laboratory	Cloudy, warm	Three soft	Well.
21	63.9	70	72	80	92	98.2	98.0	18	20	.....do	Bright, hot	Two soft	Do.
22	64.4	72	80	78	84	98.0	98.2	20	20	.....do	Cloudy, warm	One soft	Do.
23	65.1	78	84	64	72	98.0	98.0	20	16	.....do	.....do	.....do	Do.
24	63.9	72	78	78	84	98.0	98.0	18	20	.....do	.....do	Two soft	Well; perfect health.

25	64.2	74	78	72	76	98.0	98.0	18	16	....do....	Bright, warm...	One hard, one soft..	Had a slight colicky pain over appendix this a. m., lasting about ½ minute. Is a little tender over appendix to-day, but is working and has no other symptoms or physical signs; feels perfectly well otherwise.
26													Called out of city part of day.
27	64.5	72	78	84	96	98.0	97.6	20	24	Laboratory work......	Clear, hot.......	One soft............	Feels perfectly well; no symptoms around appendix.
28	64.5	74	84	84	96	98.2	98.2	24	24	....do..............	Cloudy, warm...	One hard, one soft..	Feels perfectly well.
29	64.3	72	78	78	84	98.4	97.8	20	22	....do..............	Bright, hot.....	One soft............	Do.
30	63.6	74	84	80	88	98.0	98.4	24	20	....do..............	Cloudy, hot.....	Two soft............	Excellent; has a slight pain over appendix at times.
31	63.6	72	84	64	72	98.0	98.0	24	18	....do..............	Windy, cool....	....do..........	Excellent.
Aug. 1	63.9	68	74	78	84	98.2	98.4	20	18	....do..............	Bright, hot.....	....do..........	Do.
2	64.1	68	74	78	84	98.6	98.0	18	22	None...............	Bright, warm...	One soft, one hard..	Vomited at 3 p. m. and at 10 p. m.; otherwise no symptoms.
3	63.6	72	78	78	84	98.2	97.8	18	20	Laboratory work......	Bright, hot.....	One hard..........	Physical examination to-day negative; feels perfectly well.
4	64.1	76	84	72	78	98.6	98.4	18	19	....do..............	....do.........	One soft............	Feels well. Says he felt depressed and somewhat nauseated all the week; works in morgue; has been cleaning up place this week and worked very hard in very filthy place.
5	64.1	72	78	66	78	98.0	98.2	18	19	....do..............	....do.........	Two soft............	Do.
6	64.3	78	84	72	78	97.8	98.2	18	18	....do..............	....do.........	Two soft, one hard..	Do.
7	64.1	72	78	72	78	97.8	98.0	20	19	....do..............	Bright, warm...	Two soft............	Do.
8	65.0	78	84	72	78	97.8	98.2	20	19	....do..............	Bright, cool....	One hard, one soft..	Vomited several times at 9 p. m.; says there was blood in vomitus; did not save it; felt well during day.
9	63.7	78	84	78	84	98.2	98.2	18	14	Sunday..............	Bright, warm...	Two hard..........	Feels perfectly well.
10	64.7	72	84	72	78	97.8	97.8	18	16	Laboratory work......	....do.........	One hard..........	Very well.
11	64.3	72	84	78	84	97.8	98.0	18	18	Laboratory, handball.	Cloudy, warm...	One soft............	Perfectly well.
12	64.7	72	84	76	84	98.2	98.0	18	18	Laboratory work......	Rain, warm.....	One hard..........	Do.
13	65.11	72	78	72	78	98.0	97.8	18	16	....do..............	Cloudy, warm...	One soft............	Do.
14	64.5	66	88	80	88	97.8	98.6	16	20	Laboratory, handball.	Bright, warm...	....do..........	Do.
15	64.7	78	84	76	84	97.8	97.8	18	20	Laboratory work......	Showers, warm..	Two soft............	Excellent.
16	64.4	78	86	78	86	97.8	98.6	18	20	Recreation...........	Bright, hot.....	One soft............	Do.
17	65.0	66	78	68	78	97.8	98.0	18	18	Laboratory..........	Cloudy, warm...	One hard..........	Do.
18	63.8	72	78	72	76	97.8	97.6	18	18	....do..............	Bright, warm...	Two soft............	Excellent; had griping pains in intestine early this morning; relieved by bowel movement.
19	64.5	74	84	66	74	97.6	97.6	18	16	....do..............	Cloudy, cool.....	One hard..........	Excellent.
20	64.4	72	78	72	78	97.6	97.6	18	16	....do..............	Bright, cool.....	Two soft............	Do.
21	64.1	72	84	64	72	97.6	97.8	18	16	....do..............	Bright, warm...	....do..........	Do.
22	63.8	72	78	84	96	97.8	98.2	16	14	....do..............	Bright, cool.....	One hard..........	Excellent; handball at 5 p. m.
23	64.5	72	78	72	80	97.8	97.6	16	18	Sunday..............	....do.........	One soft............	Excellent.
24	64.1	74	84	72	84	98.0	97.8	18	20	Laboratory..........	....do.........	....do..........	Perfect health; handball 5 p. m.

Daily medical record. Subject I (H. N. B.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
Aug. 25	64.5	76	82	90	102	97.2	99.8	18	22	Laboratory	Bright, cool	Two soft	Felt well this a. m.; had diarrhea this a. m.; had griping pains in abdomen all evening, and temperature of 100.6 at 7.30 p. m.
26	63.7	.....	.....	78	84	.....	100.0	.....	20	Sick	do	None	Sick to-day; ate little breakfast and went to bed; is constipated; has severe headache and pains in lumbar muscles; had pains in abdomen all last night and did not sleep; has temperature of 99.8 at 1 p. m. Diagnosis: Intestinal intoxication (?); 3 C C pills; acetanilid grs. v; hot bath.
27	63.6	72	84	76	84	98.6	98.4	19	20	Laboratory	Bright, hot	Four liquid	Is well to-day except headache; acetanilid 2 grs.; later feels perfectly well. NOTE.—B., subject, says that several years ago when he had his eyes first examined he had an attack of headache, etc., similar to one he had on Aug. 25 and 26; he had no preexisting diarrhea then as he had this time. Homatropine used both times.
28	64.7	72	84	72	78	98.0	98.0	18	20	do	Cloudy, warm	One soft	Perfect health.
29	64.5	72	78	76	84	98.4	98.4	18	24	do	do	do	Do.
30	64.4	72	78	78	84	98.4	98.2	18	24	do	Bright, hot	do	Perfect health; handball.
31	63.7	76	84	78	84	98.4	98.2	19	20	Sunday	do	do	Perfect health.
Sept. 1	64.2	74	84	72	78	98.0	98.0	18	18	Laboratory	do	do	Excellent.
2	63.7	72	78	76	88	98.4	98.4	18	22	Laboratory, handball p. m.	Bright, cool	do	Do.
3	64.8	76	84	72	78	98.0	98.0	16	18	Laboratory	do	do	Excellent; says he never felt better in his life.
4	64.8	74	86	78	84	97.8	97.8	18	20	do	Bright, hot	do	Excellent.
5	64.1	76	84	74	80	98.0	98.0	18	20	do	do	do	Do.
6	64.1	78	84	76	84	98.2	98.2	18	20	Sunday	do	do	Do.

	7	64.3	76	84	72	78	98.4	98.4	18	19	Holiday	do	do	Do.
	8	64.2	72	78	76	84	97.8	97.8	18	20	Laboratory work	Bright, warm	do	Do.
	9	63.85	78	84	78	84	98.0	98.4	18	20	do	do	None	Do.
	10	63.9	72	78	74	82	97.8	98.4	20	21	do	Bright, hot	One soft	Do.
	11	64.1	78	84	78	84	98.4	98.4	20	19	do	do	None	Do.
	12	64.1	72	78	74	78	97.8	98.4	19	20	do	Bright, warm	One soft	Do.
	13	64.1	72	78	76	84	97.8	98.0	18	19	Sunday	Smoky, warm	Two soft	Do.
	14	64.2	78	86	78	84	97.8	98.0	18	19	Laboratory work	do	One soft	Do.
	15	63.74	78	84	76	84	97.8	99.0	19	21	do	Bright, warm	do	Do.
	16	64.3	72	78	74	84	97.8	98.4	18	20	do	Bright, cool	do	Do.
	17	64.53	72	84	72	78	97.8	98.6	18	18	do	do	Two soft	Do.
	18	64.41	78	84	76	84	98.0	98.6	19	21	do	Bright, warm	One soft	Do.
	19	64.53	72	76	74	84	98.0	98.2	18	21	do	do	do	Do.
	20	64.47	78	84	72	78	98.4	98.4	18	20	Sunday	Bright, hot	do	Do.
	21	64.53	78	84	72	84	98.4	98.6	19	20	Laboratory work	do	do	Do.
	22	64.3	74	84	68	76	98.2	98.4	19	18	do	Cloudy, hot	Two soft	Do.
	23	64.1	72	78	68	74	98.0	98.0	20	20	do	Bright, hot	One hard	Excellent; has a slight dermatitis on bearded part of face.
	24	64.3	72	84	74	84	98.4	98.4	22	22	do	do	One hard, one soft	Excellent.
	25	63.6	78	84	72	78	98.6	98.4	21	20	do	do	Two soft	Do.
	26	63.2	78	84	78	84	98.0	98.4	20	21	do	do	One soft	Do.
	27	63.6	68	72	76	84	98.4	98.6	20	21	Sunday	Bright, warm	do	Do.
	28	63.74	72	78	84	90	98.6	98.8	21	22	Laboratory work	Cloudy, cold	do	Do.
	29	63.6	74	84	90	96	98.4	98.6	18	24	do	Bright, cool	Two soft	Excellent; handball at 5.30.
	30	64.1	78	84	76	88	98.6	98.8	20	21	do	do	One soft	Excellent
Oct.	1	65.45	78	90	78	84	98.4	98.6	22	22	do	Cloudy, cool	One soft	Do.
	2	63.6	78	90	60	78	98.4	98.6	21	20	do	Bright, cool	None	Do.
	3	63.4	72	78	78	84	98.0	98.6	21	22	do	do	One hard, one soft	Has had a bad headache for 3 days; complains of not being able to sleep; says he has troubles, the nature of which he refuses to detail; aside from the headache, which he describes more as pressure or tension than ache, is normal. (Phenacetin, grs. v; caffeine, grs. II; sod. bicarb., gr. v).
	4	63.6	70	78	78	84	98.2	98.4	21	22	Sunday	Bright, warm	Two soft	
	5	64.1	72	82	76	88	98.0	98.4	21	22	Laboratory	do	One soft	
	6	64.1	84	90	78	84	98.4	98.6	22	20	Laboratory and student.	do	None	Headache not so bad.
	7	64.5	84	94	78	84	98.6	98.2	24	20	do	do	One soft	Less headache.
	8	64.1	84	90	72	84	98.9	98.4	24	20	do	Rain, cold	do	Feels very well again.
	9	63.85	84	96	72	78	98.8	97.8	26	20	do	Bright, cool	do	Feels very well; handball before noon
	10	64.1	78	84	68	72	98.0	97.8	20	19	do	do	None	Excellent.
	11	63.7	76	84	78	72	98.0	98.0	22	21	Sunday	Cloudy, cold	One hard, one soft	Do.
	12	63.6	72	78	68	90	97.8	98.2	21	22	Laboratory and student.	Bright, cool	One soft	Excellent; after noon meal complained of cramp in lower bowel; ceased about 2 hours later.
	13	64.0	68	78	78	84	97.8	98.2	20	21	do	do	do	Excellent, except slight headache.
	14	63.7	64	72	78	90	97.4	97.8	20	20	do	Bright, warm	do	Excellent.
	15	63.1	72	78	72	84	97.2	98.0	20	19	do	do	do	Nervous headache on hearing bad news.

Daily medical record. Subject I (H. N. B.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
Oct. 16	63.6	78	84	80	84	98.2	98.6	20	22	Laboratory and student.	Bright, warm...	One soft..........	No headache; is in disturbed state of mind; says his head does not ache, but feels tense.
17	63.1	76	86	76	84	98.6	98.2	19	20	.....do..........	.....do..........	.....do..........	Headache gone.
18	64.1	60	78	60	74	98.4	98.2	19	20	Sunday..........	Smoky, cool.....	.....do..........	Feels well, except little headache at night.
19	64.77	72	84	76	86	98.6	97.8	20	20	Laboratory and student.	.....do..........	Three movements, diarrhea.	Excellent, except diarrhea, which began yesterday, and slight headache at night.
20	64.6	72	84	64	84	98.4	98.0	20	20	.....do..........	Bright, warm...	One soft..........	Excellent.
21	64.7	78	90	72	74	98.6	98.0	21	20	.....do..........	.....do..........	.....do..........	Do.
22	65.0	76	84	84	96	98.4	98.8	21	21	.....do..........	.....do..........	.....do..........	Do.
23	65.1	78	90	70	80	98.8	99.6	22	21	.....do..........	Cloudy, cool.....	Two soft..........	Do. (The cause of the disturbance in the general condition of this man is explained later.)
24	65.1	72	90	60	72	98.4	98.4	21	20	.....do..........	.....do..........	.....do..........	Excellent.
25	65.8	78	84	78	90	98.0	98.2	21	22	Sunday..........	Cloudy, cold....	One soft..........	Do.
26	65.8	84	90	78	86	98.4	98.4	22	21	Laboratory and student.	Rain, cold.......	.....do..........	Do.
27	66.0	76	84	72	84	98.2	98.4	20	21	.....do..........	.....do..........	.....do..........	Do.
28	66.2	72	84	76	84	98.0	98.4	20	19	.....do..........	Bright, cool.....	Two soft..........	Do.
29	66.46	78	84	60	76	98.4	98.6	20	20	.....do..........	.....do..........	One soft..........	Do.
30	66.2	76	84	76	82	98.4	98.4	20	20	.....do..........	.....do..........	Two soft..........	Do.
31	66.1	72	78	76	84	98.2	98.6	20	18	.....do..........	.....do..........	One soft..........	Do.

SUBJECT II (W. W C.).

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
July 1	68.9	72	106	84	88	98.1	......	15	16	Janitor all day.......	Cloudy, damp...	One solid..........	Excellent.
2	67.38	......	......	72	90	......	97.8	......	19	.....do..........	Bright, warm...	.....do..........	Do.
3	67.8	72	78	78	90	98.5	98.2	18	18	.....do..........	Rain..........	None..........	Do.
4	66.6	68	84	70	80	98.0	97.8	17	14	....	Bright, warm...	One hard, one soft..	Do.
5	66.9	......	......	72	84	......	98.6	......	18	Forenoon work.......	Bright, hot......	None..........	Do.

	6	67.3	72	84	72	84	98.6	98.4	18	18	All day work	Bright, hot, rain	One hard	Do.
	7	67.0	78	84	74	82	98.0	98.2	18	18	do	Cloudy, cool	None	Do.
	8	67.5	74	80	76	84	98.0	98.4	18	18	do	Bright, warm	One hard, one soft	Do.
	9	67.8	74	82	68	78	98.0	98.0	18	17	do	do	One soft	Excellent; complains of being tired.
	10	67.3	72	78	74	80	98.2	98.8	18	20	do	do	do	Excellent.
	11	66.7	78	84	78	84	98.6	98.6	18	19	do	Bright, hot	None	Do.
	12	67.0	72	78	72	84	98.6	99.0	18	19	Forenoon light	do	One soft	Do.
	13	67.0	72	78	76	84	98.0	98.2	18	19	Janitor all day	Cloudy, hot	None	Do.
	14	67.2	72	84	72	84	98.2	98.2	18	19	do	Clear, hot	One hard	Do.
	15	67.6	72	78	72	78	98.0	98.2	18	18	do	Bright, warm	do	Do.
	16	67.4	72	76	72	76	98.2	98.4	19	18	do	Warm, rain	do	Do.
	17	67.0	72	84	78	84	98.6	98.6	18	20	do	Cloudy, warm	One soft	One of the students gave him a sulphur ointment with ung. rosæ for acne on his back.
	18	67.5	66	72	76	84	98.4	98.2	18	18	do	do	None	
	19	67.0	72	84	78	84	98.2	97.2	18	19	do	Bright, warm	One hard, three soft	Ordered ointment discontinued.
	20	67.0	72	78	72	84	98.2	98.2	18	18	do	Cloudy, warm	One hard	Well.
	21	66.8	74	84	72	84	98.4	98.4	18	18	do	Bright, hot	One soft	Do.
	22	66.8	72	84	66	78	97.8	98.2	17	18	do	Cloudy, warm	None	Do.
	23	66.8	74	84	72	84	98.0	97.6	18	18	Janitor work	do	One soft	Do.
	24	66.9	72	84	72	78	97.2	97.8	18	18	do	do	do	Perfect health.
	25	66.7	72	78	72	78	98.6	98.4	18	18	do	Bright, warm	do	Do.
	26	66.9	84	92	84	92	98.8	99.2	19	22	do	Hot	One hard, one soft	Do.
	27	66.6	72	84	78	84	98.4	98.4	19	19	do	Bright, hot	None	Do.
	28	67.1	72	78	66	78	98.6	98.6	18	17	do	Cloudy, warm	One hard, one soft	Do.
	29	67.2	72	78	72	78	98.4	98.0	18	18	do	Bright, hot	One soft	Do.
	30	67.1	78	84	60	72	98.2	98.8	18	18	do	Cloudy, hot	do	Do.
	31	67.7	72	78	72	78	98.0	98.0	18	18	do	Windy, bright	None	Do.
Aug.	1	67.5	78	84	72	78	98.8	98.8	19	18	do	Bright, hot	One soft	Perfect health; had griping in abdomen.
	2	66.8	Not	here.	72	78	......	98.0	......	18	Newspaper route	Bright, warm	One hard	O. K., except griping in intestines; comes on directly after meals; relieved by bowel movement.
	3	67.3	78	86	72	78	98.0	98.2	18	18	Newspaper and janitor	Bright, hot	One soft	Excellent; griping no longer present.
	4	67.1	72	84	78	84	98.2	98.6	18	18	do	do	do	Excellent.
	5	67.4	78	84	78	84	97.8	98.4	18	18	do	do	do	Do.
	6	67.6	72	84	72	78	98.2	98.0	18	18	do	do	One hard	Do.
	7	67.7	66	78	72	78	98.6	98.6	17	16	do	Bright, warm	One soft	Do.
	8	67.8	72	84	72	78	98.2	98.0	18	17	do	Bright, cool	None	Do.
	9	67.2	74	84	72	84	98.2	98.0	18	18	do	Bright, warm	Two soft	Do.
	10	67.4	72	78	72	78	97.2	98.2	14	18	do	do	None	Do.
	11	66.4	72	78	72	78	98.2	98.2	18	18	do	Cloudy, warm	do	Do.
	12	67.9	78	84	72	84	97.8	98.2	18	18	do	Warm, rain	One soft	Do.
	13	66.9	72	78	68	84	98.8	98.2	18	17	do	Cloudy, warm	One hard, one soft	Do.
	14	67.9	72	78	72	84	98.2	97.8	19	20	do	Bright, warm	None	Do.
	15	67.5	72	78	76	84	98.2	98.6	18	20	do	Showers, warm	Two soft	Do.
	16	66.4	78	84	72	78	98.2	98.8	19	20	Newspaper	Bright, hot	One soft	Do.
	17	67.5	72	78	66	78	98.6	99.0	18	16	Newspaper and janitor	Cloudy, warm	None	Do.
	18	67.8	72	78	72	78	98.2	98.2	18	16	do	Bright, warm	One hard	Do.
	19	68.1	66	72	72	84	98.6	98.2	20	16	do	Cloudy, cool	One soft	Do.

Daily medical record. Subject 11 (W. W. C.)—Continued.

Date.	Weight, 6 p. m.	Pulse, 12 m., Sitting.	Pulse, 12 m., Standing.	Pulse, 6 p. m., Sitting.	Pulse, 6 p. m., Standing.	Temperature, 12 m.	Temperature, 6 p. m.	Respiration, 12 m.	Respiration, 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
Aug. 20	67.9	78	84	78	84	97.6	98.2	18	18	Newspaper and janitor	Bright, cool	One soft	Excellent.
21	68.1	76	84	74	84	98.2	98.6	18	20	...do	Bright, warm	...do	Do.
22	68.2	78	84	72	78	98.6	97.8	16	20	...do	Bright, cool	...do	Complains of sore throat; throat hyperemic only; feels perfectly well otherwise; doing his daily work.
23	67.9	72	78	74	84	97.6	97.8	18	20	Newspaper route	...do	None	Slight sore throat; otherwise well.
24	68.5	78	84	66	78	97.6	97.8	18	18	Newspaper and janitor	...do	Two soft	Throat practically well; feels very good.
25	68.3	72	78	84	76	97.6	98.6	18	19	...do	...do	One soft	Perfectly well.
26	68.6	66	78	72	78	97.6	98.2	18	20	...do	...do	One hard	Do.
27	68.8	78	84	66	78	98.6	97.8	20	18	...do	Bright, hot	None	Do.
28	68.7	72	84	72	84	98.6	98.6	18	18	...do	Cloudy, warm	Two soft	Do.
29	68.2	72	78	76	84	98.2	98.4	18	20	...do	Bright, hot	One soft	Do.
30	68.3	72	84	78	84	98.4	98.4	20	20	Newspaper	...do	One hard	Do.
31	68.2	76	86	72	78	98.2	98.2	22	18	Newspaper and janitor	...do	One soft	Do.
Sept. 1	68.3	66	78	72	84	97.8	98.2	18	20	...do	...do	None	Do.
2	68.6	66	78	78	84	97.8	98.6	18	19	...do	Bright, cool	One hard	Do.
3	68.6	72	84	78	84	98.2	98.6	18	19	...do	...do	...do	Do.
4	68.7	74	82	78	84	98.2	98.6	18	19	...do	Bright, hot	...do	Do.
5	69.8	72	78	76	84	98.4	98.8	18	20	...do	...do	...do	Do.
6	69.8	72	78	78	84	98.2	98.0	18	19	Sunday newspaper	...do	One soft	Excellent.
7	68.8	78	84	76	84	98.2	98.2	18	20	Newspaper and janitor	...do	One hard	Do.
8	68.74	72	76	74	78	98.0	98.4	18	20	...do	Bright, warm	...do	Do.
9	68.63	72	78	78	84	98.2	98.2	18	18	...do	...do	None	Do.
10	69.1	72	78	78	84	98.8	99.0	19	20	...do	Bright, hot	One hard	Do.
11	68.85	78	84	78	90	98.4	99.4	19	19	...do	...do	One soft	Do.
12	68.63	78	90	72	78	98.2	98.6	20	19	...do	Bright, warm	None	Excellent; nail into foot.
13	68.2	72	78	78	84	98.6	98.4	18	19	Sunday newspaper	Smoky, warm	One hard	Excellent, except for sore foot.
14	69.1	74	84	77	84	98.0	98.4	20	19	Janitor and newspaper	Bright, smoky, warm.	...do	Ran nail into foot Sept. 12; opened wound to-day and applied moist $HgCl_2$ dressing; gave 1,500 units tetanus antitoxin to-day; otherwise in perfect health,

	15	69.1	72	78	76	90	98.6	98.6	18	22	....do........	Bright, warm...	...do.........	Wound in foot open and looks well; excellent.
	16	68.74	66	77	74	84	98.6	98.4	18	18	....do......	Bright, cool..	...do..........	Wound open; excellent general health.
	17	68.85	78	84	78	84	98.4	98.4	19	19	....do........	.do.....	..do........	Wound open; looks well; excellent general health.
	18	68.95	78	84	66	78	98.4	98.6	19	19	....do.......	Bright, warm.	...do......	Wound closed; no inflammation; excellent general health.
	19	68.8	78	84	72	78	98.4	98.6	18	19	....do..............	.do......	..do......	Excellent general health.
	20	68.6	84	90	74	84	98.4	98.6	20	20	Sunday...........	Bright, hot....	One soft...	Do.
	21	69.98	72	78	78	84	98.2	98.6	19	19	Newspaper and janitor	.do.......	One hard....	Do.
	22	69.5	60	72	72	78	98.4	98.6	20	21	....do..............	Cloudy, hot.	..do.....	Do.
	23	69.1	72	78	74	84	98.4	98.6	17	21	....do..............	Bright, hot....	One soft......	Do.
	24	69.1	66	72	72	84	99.0	98.6	18	18	....do............	....do......	None...........	Do.
	25	68.1	66	72	76	84	98.4	98.6	18	20	....do.............	....do.......	One soft	Do.
	26	68.1	66	72	84	90	98.4	98.8	18	20	....do..............	....do........	...do........	Do.
	27	67.8	78	90	72	84	99.2	98.6	20	17	Sunday, handball...	Bright, warm....	..do.........	Do.
	28	69.1	66	72	76	84	98.4	98.6	18	20	Janitor and newspaper.	Cloudy, cold.....	..do.........	Do.
	29	68.7	72	78	74	78	98.4	98.6	18	20	....do..............	Bright, cool....	None..........	Do.
	30	68.6	74	84	72	78	98.4	98.8	19	18	....do..............	....do.........	One soft..........	Do.
Oct.	1	69.3	78	90	78	84	98.8	98.6	19	18	Newspaper and janitor.	Cloudy, cool...	Two soft......	Do.
	2	68.6	78	84	78	90	98.6	99.0	19	21	Medical student and newspaper.	Bright, cool.	....do........	Do.
	3	67.57	72	84	78	84	98.6	98.0	18	18	....do........	....do......	One soft.........	Excellent, except has had diarrhea with some colicky pains before bowel movements; cause unknown, unless it is the cold weather; says he caught a little cold on Oct. 2.
	4	67.3	78	84	84	90	98.4	99.2	18	21	Sunday..........	Bright, warm...	Two soft.........	
	5	67.14	78	84	78	84	98.6	98.4	18	20	Newspaper route......	....do.....	Three soft.......	
	6	67.1	78	84	74	84	98.2	98.6	19	22	Student and newspaper.	....do.......	None..........	Excellent.
	7	67.4	78	84	78	84	98.4	98.6	20	18	....do..............	...do.......	Two soft.......	Do.
	8	68.6	78	84	72	78	98.4	98.6	19	19	....do...........	Rain, cold......	....do.........	Do.
	9	67.1	90	104	68	78	99.2	97.8	24	20	Handball.........	Bright, cool....	Three soft........	Do.
	10	66.8	72	78	84	96	97.8	98.4	20	22	....do...........	....do..........	One soft..........	Do.
	11	68.6	78	84	72	78	97.8	98.4	19	18	Sunday............	Bright, windy, cold.	None............	Do.
	12	68.13	72	78	76	86	97.8	98.4	18	20	Student and newspaper.	Bright, cool....	One hard.........	Do.
	13	68.0	66	72	78	84	97.6	98.0	18	18	....do.............	...do.........	None..............	Do.
	14	68.2	68	76	84	90	97.4	97.6	19	19	....do..............	Bright, warm...	One soft..........	Do.
	15	68.7	72	78	72	78	98.0	98.4	19	19	....do..............	....do.........	One hard.........	Do.
	16	68.8	78	84	84	90	97.8	98.4	19	19	....do.............	Bright, windy, warm.	One hard, one soft..	Do.
	17	67.9	78	86	84	90	97.8	98.6	19	20	....do..............	Bright, warm...	None..............	Do.
	18	69.2	78	90	84	90	98.0	99.0	20	20	Sunday newspaper...	Smoky, cool..	One hard, one soft..	Do.
	19	68.2	78	90	72	86	98.4	98.6	20	21	Student and newspaper.	....do.........	None..............	Do.
	20	69.9	72	78	66	78	98.6	98.0	19	20	....do..............	Bright, warm...	One soft.........	Do.
	21	68.6	78	84	84	90	98.0	97.8	20	20	....do..............	....do.......	Two soft.........	Do.
	22	68.7	84	90	84	96	98.2	98.0	21	22	....do..............	...do........	None..............	Do.
	23	69.5	78	84	90	96	98.4	99.2	20	21	....do,..............	Cloudy, cool....	One soft........	Do,

Daily medical record. Subject II (W. W. C.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
Oct. 24	69.3	84	96	78	84	97.0	98.0	20	20	Student and newspaper.	Cloudy, cool	None	Excellent.
25	69.6	84	90	84	90	98.8	98.6	20	21	Sunday, newspaper	Cloudy, cold	One hard	Do.
26	70.65	84	90	84	90	98.4	98.6	22	20	Student and newspaper.	Rain, cold	One soft	Do.
27	70.5	84	90	72	78	98.8	98.4	21	20	do	do	One hard	Do.
28	69.3	84	90	72	78	98.2	98.4	22	20	do	Bright, cool	One soft	Do.
29	69.5	84	96	84	90	98.4	98.4	20	20	do	do	One hard	Do.
30	69.75	66	72	72	84	98.6	98.4	20	18	do	do	One soft	Do.
31	69.5	72	76	78	84	98.4	98.6	20	20	do	do	do	Do.

SUBJECT III (A. G.).

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
July 1	72.9	72	87	66	84	98.2	......	18	16	Chemical laboratory	Cloudy, damp	Two semi-solid	Very good.
2	71.81	......	......	64	78	......	98.4	......	15	do	Bright, warm	......	Do.
3	72.7	72	80	68	72	98.4	98.6	18	18	do	Rain	One solid	Do.
4	72.3	72	84	84	96	98.4	99.0	16	18	Light laboratory	Bright, warm	Two soft	Do.
5	72.6	......	......	76	84	......	98.5	......	18	Chemical laboratory	Bright, hot	do	Do.
6	72.6	74	84	72	80	98.6	99.0	16	20	do	Bright, hot, cloudy, rain.	do	Do.
7	72.1	68	78	70	78	98.6	99.0	18	18	do	Cloudy, cool	do	Very good; says he was feverish during day.
8	71.3	72	80	70	82	98.2	99.2	18	24	Hard laboratory	Bright, warm	do	Very good.
9	71.3	70	78	72	78	98.4	99.0	24	18	Laboratory	do	One soft	Do.
10	71.7	72	78	72	78	98.6	99.0	24	20	do	do	do	Do.
11	71.6	78	84	78	84	99.4	99.2	24	18	do	Bright, hot	Two soft	Do.
12	71.6	72	78	70	78	98.8	99.0	18	20	do	do	One soft	Do.
13	71.5	72	78	72	90	99.0	98.6	18	20	do	Cloudy, hot	Two soft	Do.
14	71.2	78	96	74	84	98.8	99.0	18	20	do	Clear, hot	do	Do.
15	71.3	72	78	72	78	98.2	98.2	18	19	do	Bright, warm	do	Do.
16	71.1	72	80	90	94	98.6	98.2	18	18	do	Cloudy, warm, rain.	One soft	Do.
17	72.0	78	84	72	76	98.8	98.8	18	18	do	Cloudy, warm	Two soft	Perfectly well.

	18	71.9	74	80	72	78	98.2	98.8	18	19	..do	....do	..do	Do
	19	72.4	70	78	78	84	98.2	98.0	18	19	Recreation	Warm, bright	..do	Do.
	20	72.0	72	78	66	74	99.2	98.0	14	19	Laboratory	Cloudy, warm	..do	Do.
	21	72.1	80	86	76	80	98.6	98.5	21	18	..do	Bright, warm	..do	Do.
	22	72.3	78	84	72	80	98.6	98.6	18	19	..do	Cloudy, warm	..do	Do.
	23	72.3	78	86	78	90	98.8	99.0	22	20	..do	....do	One soft	Do.
	24	71.7	78	84	72	78	98.4	99.0	20	18	..do	....do	Two fluid	Perfect health; two liquid stools this a. m.; no other symptoms.
	25	71.5	78	86	72	84	98.2	98.4	20	18	..do	Bright, warm	One soft	Perfect health; bowel movements normal again.
	26	71.8	74	84	66	72	98.4	98.6	20	18		Bright, hot	....do	Perfect health.
	27	72.1	72	78	74	80	98.2	98.8	20	18	Laboratory	Clear, hot	....do	Do.
	28	72.0	74	84	76	84	98.8	98.6	20	22	..do	Cloudy, warm	....do	Do.
	29	71.8	72	78	74	80	98.4	98.6	22	20	..do	Bright, hot	....do	Do.
	30	71.5	72	78	78	90	98.8	98.2	18	20	..do	Cloudy, hot	One hard	Do.
	31	71.6	72	84	78	84	98.4	98.2	18	20	..do	Bright, windy, cool.	One soft	Do.
Aug.	1	72.0	72	84	72	84	98.8	98.6	18	20	..do	Bright, hot	....do	Do.
	2	72.3	72	78	72	84	98.0	98.2	18	22		Bright, warm	....do	Excellent.
	3	72.0	78	84	72	84	98.6	98.6	18	18	Laboratory	Bright, hot	....do	Do.
	4	71.0	78	84	72	84	98.6	98.6	18	18	..do	....do	....do	Do.
	5	71.6	72	78	66	78	98.2	98.0	16	18	..do	....do	Two soft	Do.
	6	72.0	66	72	78	84	98.0	98.0	18	24	..do	....do	One soft	Excellent; athletic work at 6 p. m.
	7	72.0	66	72	72	78	98.0	98.2	18	18	..do	Bright, warm	....do	Excellent.
	8	71.8	72	78	72	84	98.0	98.2	18	18	..do	Bright, cool	....do	Do.
	9	71.8	78	84	78	84	98.2	97.8	18	16		Bright, warm	....do	Do.
	10	71.6	72	78	72	78	98.6	98.6	18	18	Laboratory	....do	Two soft	Do.
	11	71.6	66	72	72	78	98.4	98.4	14	18	..do	Cloudy, warm	One soft	Do.
	12	71.9	66	72	72	78	98.2	98.6	18	18	..do	Warm, rain	....do	Do.
	13	71.9	66	78	76	84	98.4	98.0	16	18	..do	Cloudy, warm	None	Do.
	14	71.4	72	84	66	72	98.2	98.2	20	18	..do	Bright, warm	Three soft	Do.
	15	71.8	72	78	76	84	98.4	98.6	18	20	..do	Showers, warm	Two soft	Do.
	16	71.9	72	78	78	86	98.1	98.8	18	22	Sunday	Bright, hot	One hard	Do.
	17	70.9	84	90	78	84	98.6	98.2	18	16	Laboratory	Cloudy, warm	Two soft	Do.
	18	72.0	72	78	74	84	98.0	97.8	14	18	..do	Bright, warm	One soft	Do.
	19	72.2	72	84	78	84	98.2	98.0	18	18	..do	Cloudy, cool	....do	Do.
	20	72.3	78	84	78	86	98.0	98.0	18	22	..do	Bright, cool	Two soft	Do.
	21	72.3	72	84	78	84	97.8	98.6	18	20	..do	Bright, warm	....do	Do.
	22	72.1	72	78	74	84	97.8	98.2	18	18	..do	Bright, cool	One soft	Do.
	23	72.2	72	84	66	80	98.0	98.4	18	20	Sunday	....do	One hard	Do.
	24	72.8	60	72	78	84	99.2	98.0	18	18	Laboratory	....do	Two soft	Do.
	25	72.0	60	72	78	84	98.6	98.8	16	18	..do	....do	One soft	Do.
	26	72.3	72	78	76	84	98.2	98.4	18	20	..do	....do	Two soft	Do.
	27	73.1	78	84	72	84	98.6	98.2	18	20	..do	Bright, hot	One soft	Do.
	28	73.3	72	78	78	84	98.6	98.6	18	20	..do	Cloudy, warm	Two soft	Do.
	29	72.7	72	76	76	84	98.6	98.4	18	20	..do	Bright, hot	One soft	Do.
	30	72.9	72	78	72	78	98.6	98.4	18	18	Sunday	....do	....do	Do.
	31	72.7	76	84	84	90	98.6	98.4	18	20	Laboratory	....do	Two soft	Do.
Sept.	1	72.45	78	84	78	84	98.4	98.6	18	20	..do	....do	One hard	Do.
	2	73.18	72	78	74	84	97.8	98.4	18	20	..do	Bright, cool	One soft	Do.
	3	73.7	72	84	78	84	98.2	97.8	18	19	..do	....do	One hard, one soft	Excellent; says he never felt better.
	4	73.3	78	84	72	78	98.4	98.0	19	20	..do	Bright, hot	One soft	Excellent.

Daily medical record. Subject III (A. G.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
Sept. 5	73.3	74	84	74	80	98.6	99.0	18	20	Laboratory	Bright, hot	Two soft	Excellent.
6	74.3	72	78	74	84	98.0	98.8	18	20	Sunday	....do	One soft	Do.
7	73.4	74	84	72	78	98.2	98.0	18	20	Holiday	....do	....do	Do.
8	73.74	72	84	74	82	98.2	98.8	20	20	Laboratory	Bright, warm	....do	Do.
9	73.3	74	84	84	90	98.4	98.6	21	22	....do	....do	....do	Do.
10	72.9	84	90	84	90	98.8	98.4	20	21	....do	Bright, hot	Two soft	Do.
11	72.9	72	84	78	84	98.4	98.4	20	21	....do	....do	....do	Do.
12	72.45	78	84	78	84	98.6	98.4	20	20	....do	Bright, warm	One soft	Do.
13	72.92	66	76	78	84	98.8	98.2	19	20	Sunday, laboratory	Smoky, warm	....do	Do.
14	73.63	68	74	72	84	98.6	98.6	20	19	Laboratory	Bright, smoky, warm.	One soft, one hard	Do.
15	73.74	78	84	72	78	97.8	98.6	20	21	....do	Bright, warm	One soft	Do.
16	73.6	72	84	78	86	98.0	98.4	20	20	....do	Bright, cool	None	Do.
17	73.3	72	76	84	90	98.4	98.0	18	21	....do	....do	One soft	Do.
18	73.6	78	84	74	84	98.6	98.4	19	20	....do	Bright, warm	Two soft	Do.
19	73.4	84	90	76	84	98.6	98.4	21	20	....do	....do	....do	Do.
20	73.6	78	84	76	84	98.6	98.2	21	20	Sunday	Bright, hot	....do	Do.
21	73.85	76	84	74	84	98.4	98.6	20	21	Laboratory	....do	One soft	Do.
22	73.6	72	78	72	84	98.6	98.4	20	20	....do	Cloudy, hot	Two soft	Do.
23	74.1	78	84	74	84	98.4	98.2	21	20	....do	Bright, hot	....do	Do.
24	73.85	74	82	84	90	98.2	98.6	20	21	....do	....do	....do	Do.
25	73.03	78	90	84	94	98.6	98.6	22	24	....do	....do	One soft	Do.
26	73.03	74	94	84	90	98.4	98.8	22	24	....do	....do	Two soft	Do.
27	73.6	72	78	74	84	98.4	98.4	22	24	Sunday	Bright, warm	Two hard	Do.
28	74.3	66	74	72	84	98.6	98.4	21	20	Laboratory	Cloudy, cold	Two soft	Do.
29	73.5	78	84	72	78	98.4	98.2	19	18	....do	Bright, cool	....do	Do.
30	73.6	74	84	90	96	98.4	98.6	20	24	....do	....do	One soft	Excellent; exercise before p. m. data.
Oct. 1	74.1	78	90	72	84	98.6	98.6	20	19	....do	Cloudy, cool	Two soft	Excellent.
2	74.3	78	84	70	90	98.4	98.6	20	20	....do	Bright, cool	One soft	Do.
3	74.53	72	78	90	96	98.6	98.8	20	22	....do	....do	Two soft	Do.
4	74.3	74	84	78	84	98.4	98.6	20	21	Sunday, laboratory a. m.	Bright, warm	....do	Do.
5	74.1	78	84	84	90	98.4	99.0	20	21	Laboratory	....do	One hard, one soft	Do.

6	73.03	78	84	72	78	99.2	98.8	22	21	Laboratory and student.	....do..........	Three soft..........	Do.
7	74.86	90	96	84	90	98.4	98.6	24	22	.....do..............	....do..........	Two soft..........	Do.
8	74.1	72	84	72	78	98.6	98.4	20	21	.....do..............	Rain, cold......	One soft..........	Do.
9	74.2	90	96	84	90	98.2	98.6	23	20	.....do..............	Bright, cool.....	One hard..........	Excellent; handball before noon.
10	74.3	72	78	90	96	98.2	99.2	20	23	.....do..............	....do..........	One soft..........	Excellent.
11	74.75	72	78	84	90	97.8	98.2	20	21	Sunday, laboratory...	Bright, windy, cold.	Two soft..........	Do.
12	74.86	72	84	78	84	98.2	98.6	20	21	Student and laboratory.	Bright, cool.....	....do..........	Do.
13	74.3	72	78	72	78	98.6	98.6	19	20	.....do..............	....do..........	....do..........	Do
14	74.4	72	84	72	78	99.0	99.0	20	20	.....do..............	Bright, warm...	One soft..........	Do.
15	74.5	72	84	72	85	99.0	99.0	21	20	.....do..............	....do..........	....do..........	Do.
16	74.5	78	84	72	90	98.6	98.8	20	21	.....do..............	Bright, windy, warm.	Two soft..........	Do.
17	74.7	90	96	90	96	98.8	97.8	24	25	.....do..............	Bright, warm...	One soft..........	Do.
18	75.2	72	84	72	78	98.0	97.6	20	21	Sunday, laboratory a. m. and p. m.	Smoky, cool.....	Two soft..........	Do.
19	74.3	78	94	72	84	98.4	99.0	21	20	Laboratory and student.	....do..........	Diarrhea, two movements.	Do.
20	74.2	84	90	78	84	98.6	98.6	20	21	.....do..............	Bright, warm...	None..........	Do.
21	74.1	84	90	90	96	99.4	98.4	24	25	.....do..............	....do..........	Two soft..........	Do.
22	74.65	90	96	78	84	99.2	99.0	24	24	.....do..............	....do..........	One soft..........	Do.
23	74.64	78	84	84	90	99.0	98.6	23	23	.....do..............	Cloudy, cool....	....do..........	Do.
24	74.4	72	78	78	80	97.6	97.2	21	22	.....do..............	....do..........	Three soft..........	Do.
25	75.2	66	72	72	84	98.4	99.4	20	20	Sunday..............	Cloudy, cold....	Two soft..........	Do.
26	75.0	84	90	72	84	98.6	99.0	21	20	Laboratory and student.	Rain, cold......	....do..........	Do.
27	74.3	72	78	78	90	98.4	98.2	20	21	.....do..............	....do..........	....do..........	Do.
28	74.5	72	78	72	84	98.4	99.0	20	20	.....do..............	Bright, cool.....	One soft..........	Do.
29	74.7	78	84	72	78	98.4	98.6	20	21	.....do..............	....do..........	....do..........	Do.
30	74.98	66	78	72	78	98.8	98.0	20	20	.....do..............	....do..........	One hard..........	Do.
31	75.2	72	76	72	78	99.0	98.6	20	20	.....do..............	....do..........	Two soft..........	Do.

SUBJECT IV (O. F. L.).

	Kilogms.											*Movements.*	
July 1	......	......	......	......	......	......	......	......	......		......	......	
2	66.9	......	......	72	84	......	98.2	......	10	Chemical laboratory...	Bright, warm...	One solid..........	Very good.
3	67.3	72	78	76	84	98.4	98.0	12	14	.....do..............	Rain..........	....do..........	Do.
4	67.4	72	78	72	84	98.0	98.4	14	12	.....do..............	Bright, warm...	....do..........	Do.
5	66.9	......	......	76	84	......	98.6	......	14	None..............	Bright, hot.....	....do..........	Do.
6	67.0	72	78	72	84	98.4	98.4	14	12	Chemical laboratory.	Bright, cloudy, hot.	....do..........	Do.
7	68.1	72	78	72	80	98.4	98.2	8	10	.....do..............	Cloudy, cool....	One soft..........	Do.
8	68.2	70	76	72	78	98.2	99.0	8	8	.....do..............	Bright, warm...	....do..........	Do.
9	67.5	72	78	72	78	98.4	98.2	8	7	.....do..............	....do..........	....do..........	Do.
10	66.4	72	78	74	80	98.2	98.8	8	8	.....do..............	....do..........	....do..........	Do.
11	66.7	66	72	72	78	98.4	98.6	8	7	.....do..............	Bright, hot.....	....do..........	Do.
12	66.6	72	80	74	80	97.8	98.4	8	7	None..............	....do..........	....do..........	Do.

Daily medical record. Subject IV (O. F. L.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
July 13	66.6	72	78	76	80	98.2	98.2	7	8	Chemical laboratory	Cloudy, hot	One soft	Very good.
14	66.4	66	78	72	78	98.6	98.4	7	6	do	Clear, hot	One hard	Do.
15	67.0	66	72	72	78	98.4	98.2	7	6	do	Bright, warm	do	Do.
16	66.6	72	76	72	78	98.4	99.0	7	7	do	Cloudy, warm, rain.	Two soft	Do.
17	67.2	60	66	78	84	98.0	98.0	6	7	Medical student	Cloudy, warm	Two hard	Do.
18	67.2	66	72	72	78	98.0	98.2	6	6	do	do	One hard	Do.
19	67.3	72	78	68	72	98.0	98.0	6	7		Bright, warm	do	Do.
20	67.5	78	84	72	78	98.2	98.0	8	7	Medical student	Cloudy, warm	do	Do.
21		72	78	74	78	98.2	98.4	7	8	do	Bright, hot	do	Do.
22		74	80	72	76	98.0	98.2	8	8		Cloudy, warm	do	Very good; Springfield to see mother; left town this a. m. and recorded own data.
23	66.0	72	78	72	76	98.2	98.0	7	7	Student	do	do	Well; worried about mother's health.
24	66.3	72	78	84	88	98.0	98.6	8	10	do	do	Two hard	Perfect health.
25	67.2	74	78	74	84	98.0	98.4	8	8	do	Bright, warm	do	Do.
26	67.2	72	78	84	90	98.2	98.4	8	9		Bright, hot	do	Do.
27	67.5	74	78	72	78	98.2	98.4	8	8	Student	do	do	Do.
28	66.7	66	72	78	84	98.0	98.4	8	8	do	Cloudy, warm	do	Feels perfectly well; is constipated.
29	67.1	72	78	72	78	98.2	98.4	8	8	do	Bright, hot	None	Perfectly well.
30	66.6	72	78	74	84	98.6	98.4	7	7	do	Cloudy, hot	One soft	Do.
31	67.6	72	84	72	78	98.4	97.8	8	8	do	Bright, windy, cool.	Two hard	Do.
Aug. 1	67.1	72	78	60	72	98.6	98.4	8	8	do	Bright, hot	One hard	Excellent.
2	66.8	60	72	72	78	98.0	98.2	7	7		Bright, warm	do	Good, except emesis at 3 p. m. and nausea at about 10 p. m.; attributes it to hash at noon.
3	66.3	72	78	76	84	98.2	98.6	7	8	Student	Bright, hot	One soft	Perfect health; physical examination negative.
4	66.6	74	84	78	84	98.6	98.4	8	7	do	do	One hard	Excellent.
5	67.2	66	72	72	78	98.2	98.0	7	8	Laboratory	do	Two hard	Do.
6	67.9	66	78	72	78	98.0	98.0	7	7	do	do	Two hard, one soft	Do.
7	66.6	72	78	78	86	98.2	98.2	8	8	Handball, laboratory	Bright, warm	Two soft	Do.
8	67.6	60	66	72	78	97.8	98.0	6	8	Recreation	Bright, cool	One soft	Do.
9	67.3	72	76	78	84	97.8	97.8	7	8	Laboratory	Bright, warm	One hard	Do.
10	67.6	66	72	60	72	97.8	98.0	6	6	do	do	do	Do.

	11	66.0	66	72	72	78	97.8	98.4	7	8	Handball	Cloudy, warm	do	Do.
	12	67.5	54	66	66	78	97.8	97.4	6	6	Laboratory	Warm, rain	do	Do.
	13	66.9	66	74	66	78	98.0	97.8	7	8	do	Cloudy, warm	do	Do.
	14	66.4	66	72	74	84	98.4	98.6	7	8	Laboratory, handball	Bright, warm	Two hard	Do.
	15	67.3	72	78	66	76	97.8	97.4	7	8	Laboratory	Showers, warm	One hard	Do.
	16	67.0	76	84	78	90	98.4	99.0	8	10	Sunday	Bright, hot	do	Do.
	17	67.4	60	72	66	72	97.8	98.2	8	7	Laboratory	Cloudy, warm	do	Do.
	18	68.1	68	74	72	78	98.0	98.2	7	6	do	Bright, warm	do	Excellent; had some griping pains in intestines this morning before bowel movement.
	19	67.4	66	72	60	72	97.8	98.0	6	6	do	Cloudy, cool	None	Excellent.
	20	67.9	66	72	72	78	97.8	98.0	6	7	do	Bright, cool	One hard	Perfect health.
	21	67.6	60	72	72	76	98.2	98.4	6	7	do	Bright, warm	do	Do.
	22	67.6	62	72	84	90	97.8	98.2	6	8	do	Bright, cool	do	Perfect health; hand ball 5 p. m.
	23	68.0	60	72	72	84	97.6	97.8	6	7	Sunday	do	do	Perfect health.
	24	68.5	72	78	74	84	98.6	98.4	6	7	Laboratory	do	do	Perfect health; hand ball 5 p. m.
	25	68.0	72	78	66	78	97.6	97.4	7	6	do	do	do	Perfect health.
	26	68.2	60	72	78	84	98.0	97.8	6	6	do	do	do	Do.
	27	68.0	66	78	72	76	97.8	98.0	7	6	do	Bright, hot	One soft	Do.
	28	68.1	66	78	72	78	98.6	98.4	7	6	do	Cloudy, warm	One hard	Do.
	29	67.7	66	72	84	90	98.0	98.6	7	7	do	Bright, hot	do	Do.
	30	67.9	78	84	78	84	98.6	98.4	7	7	Sunday, handball	do	do	Do.
	31	68.1	72	78	72	84	98.0	98.4	6	7	Laboratory	do	do	Do.
Sept.	1	67.9	66	72	72	78	98.2	98.4	6	6	do	do	do	Do.
	2	67.5	72	78	76	86	98.4	98.6	7	8	Laboratory, handball p. m.	Cool, bright	do	Do.
	3	68.2	60	72	60	72	97.8	98.0	7	7	Laboratory	do	do	Do.
	4	68.4	66	78	72	78	98.2	98.0	7	7	do	Bright, hot	One soft	Do.
	5	67.6	74	84	72	78	98.6	98.4	7	7	do	do	do	Do.
	6	68.1	66	78	78	84	98.0	98.6	8	8	Sunday	do	do	Do.
	7	67.8	72	78	72	78	98.4	97.8	8	7	Holiday	do	do	Excellent.
	8	68.0	72	78	60	72	98.2	97.6	6	7	Laboratory	Bright, warm	Two hard	Very well, except slight sore throat since this a. m.; throat appears hyperemic, and some of the follicles in post-pharynx are a little swollen; no exudate.
	9	67.46	72	78	72	84	98.4	98.6	6	7	do	do	One hard	Sore throat gone to-day; feels excellent.
	10	68.2	66	78	60	72	98.0	98.2	6	6	do	Bright, hot	do	Excellent.
	11	67.57	68	74	72	84	98.4	98.6	6	7	do	do	One soft	Excellent; slight headache at night.
	12	67.35	72	78	74	84	97.8	98.6	7	7	do	Bright, warm	do	Has had headache for two nights, coming on after evening meal; cold water applications relieve completely; has not worn his glasses for these two days and the pain probably is the result.
	13	67.57	68	76	72	84	98.0	98.2	7	7	Sunday	Smoky, warm	do	Excellent.
	14	68.0	72	78	66	78	98.4	98.2	7	7	Laboratory	Bright, smoky, warm.	Two soft	Do.
	15	68.2	72	78	76	84	97.8	98.4	7	7	do	Bright, warm	One hard	Do.
	16	67.91	78	84	74	86	97.8	98.4	7	8	do	Bright, cool	One soft	Do.
	17	68.18	66	78	72	84	98.0	98.2	7	7	do	do	do	Do.

Daily medical record. Subject IV (O. F. L.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
Sept. 18	67.46	68	78	76	84	98.0	98.4	7	7	Laboratory	Bright, warm	One soft	Excellent.
19	67.4	66	72	74	86	98.2	98.6	6	7	do	do	do	Do.
20	67.68	72	78	74	84	98.4	98.6	7	7	Sunday	Bright, hot	One hard	Do.
21	67.6	72	78	76	84	98.0	98.4	7	7	Laboratory	do	do	Do.
22	67.9	74	84	78	86	98.4	98.6	7	7	do	Cloudy, hot	One soft	Do.
23	67.02	72	78	76	84	98.0	98.4	6	7	do	Bright, hot	do	Do.
24	68.2	66	72	68	74	98.0	97.8	6	6	do	do	One hard	Do.
25	66.35	78	84	72	78	98.8	98.4	7	6	do	do	One soft	Do.
26	66.01	72	84	78	86	98.4	98.4	7	8	do	do	do	Excellent; has a small boil on neck.
27	66.8	74	78	66	78	98.4	98.0	7	6	Sunday, handball	Bright, warm	do	Excellent.
28	67.57	72	78	72	76	98.2	98.0	7	6	Laboratory	Cloudy, cold	None	Do.
29	67.0	72	78	78	90	98.2	98.4	7	9	do	Bright, cool	do	Excellent; handball before p. m. data.
30	67.57	74	84	76	88	98.4	98.6	7	7	do	do	One soft	Excellent; boil going away; not opened.
Oct. 1	67.57	72	78	76	84	98.4	98.6	7	6	do	Cloudy, cool	do	Excellent.
2	67.46	74	84	76	84	98.4	98.6	7	7	do	Bright, cool	do	Do.
3	67.6	72	76	74	84	98.0	98.6	7	7	do	do	None	Do.
4	67.6	74	84	76	84	98.4	98.4	7	7	Sunday	Bright, warm	do	Do.
5	67.4	72	78	78	84	98.2	98.6	7	8	Laboratory, medical student.	do	One soft	Excellent; had a sudden pain in lower right part of abdomen while walking to-day, but this passed away very soon.
6	67.35	76	84	74	82	98.6	98.4	7	7	do	do	do	Excellent.
7	67.46	72	84	76	84	98.4	98.6	7	7	do	do	do	Do.
8	67.57	74	84	76	84	98.4	98.6	7	7	do	Cold, rain	do	Do.
9	67.68	84	96	72	84	98.6	98.4	10	7	do	Bright, cool	do	Excellent; handball before noon data.
10	67.6	72	78	76	84	98.0	98.2	7	7	do	do	do	Excellent.
11	67.7	76	86	78	90	98.4	98.6	9	10	Sunday	Bright, windy, cold.	do	Do.
12	68.3	72	78	76	84	97.8	98.2	7	7	Laboratory, student	Bright, cool	Three soft	Do.
13	68.2	76	86	74	84	97.8	98.0	7	7	do	do	One soft	Do.
14	67.9	72	84	76	86	97.6	98.0	7	7	do	Bright, warm	do	Do.

15	68.2	76	84	84	96	98.0	100.0	8	12	.....do	.....do	.....do	Severe cramp in abdomen at 6 a. m., just before taking bath; lasted 10 minutes and then disappeared; excellent otherwise; in evening had temperature of 100° F., and says he was sick all night with cramps.
16	68.4	78	90	78	86	98.8	97.8	8	7	.....do	Bright, windy, warm.	One hard	Excellent.
17	68.13	72	84	84	92	98.2	99.4	7	10	.....do	Bright, warm	.....do	Do.
18	68.2	74	86	76	94	98.4	99.2	7	8	Sunday, laboratory a. m.	Smoky, cool	One soft	Do.
19	69.2	68	78	72	84	98.0	98.6	7	7	Labaratory and student.	.....do	None	Do.
20	69.0	76	84	80	94	98.6	98.8	8	8	.....do	Bright, warm	One soft	Do.
21	69.1	74	86	76	90	98.8	99.0	8	8	.....do	.....do	.....do	Do.
22	68.5	76	86	84	96	98.8	99.0	9	9	.....do	.....do	One hard	Do.
23	68.6	78	86	80	88	98.8	99.0	8	8	.....do	Cloudy, cool	One soft	Do.
24	68.2	76	84	72	78	98.6	98.6	8	8	.....do	.....do	.....do	Do.
25	68.7	78	86	78	92	98.8	98.8	8	8	Sunday	Cloudy, cold	.....do	Do.
26	68.85	72	80	76	84	98.6	98.8	7	8	Laboratory, student	Rain, cold	.....do	Do.
27	68.85	74	86	72	84	98.6	98.4	8	7	.....do	.....do	.....do	Do.
28	68.7	76	84	72	84	98.4	98.6	7	7	.....do	Bright, cold	.....do	Do.
29	68.85	72	78	76	84	98.0	98.2	7	7	.....do	.....do	One hard	Do.
30	69.4	78	86	72	78	98.2	98.0	7	7	.....do	.....do	One soft	Do.
31	70.4	76	84	74	86	98.4	98.6	7	8	.....do	.....do	.....do	Do.

SUBJECT V (A. M. N.).

	Kilogms.											*Movements.*	
July 1	73.4	69	88	66	78	98.2	......	16	16	Chemical laboratory	Cloudy	One solid	Perfect health.
2	72.9	......	......	72	88	......	98.8	......	18	.....do	Bright, warm	None	Do.
3	73.7	66	72	72	84	98.2	98.6	20	22	.....do	Rain	.....do	Do.
4	73.3	66	78	76	84	98.2	98.6	18	16	.....do	Bright, warm	One soft	Do.
5	72.7	......	......	66	74	......	98.6	......	20	.....do	Bright, hot	.....do	Do.
6	72.7	72	84	72	80	98.8	99.2	18	22	.....do	Bright, cloudy, hot.	.....do	Do.
7	73.7	72	78	72	80	98.2	98.2	24	22	.....do	Cloudy, cool	.....do	Do.
8	73.3	72	78	76	84	98.2	98.4	20	21	.....do	Bright, warm	.....do	Do.
9	72.5	72	78	72	78	99.0	98.0	24	24	.....do	.....do	.....do	Do.
10	72.7	72	80	84	90	98.4	99.0	20	24	Hard, physical	.....do	.....do	Do.
11	72.5	72	78	78	82	99.2	99.6	19	22	Chemical laboratory	Bright, hot	.....do	Do.
12	72.4	66	75	72	78	99.2	98.0	22	24	.....do	.....do	.....do	Do.
13	72.6	72	80	81	88	98.0	97.8	20	22	.....do	Cloudy, hot	.....do	Do.
14	73.1	60	74	66	78	97.8	99.0	22	20	.....do	Clear, hot	.....do	Do.
15	72.4	66	72	74	82	97.2	98.6	18	14	.....do	Clear, warm	Two soft	Do.
16	72.4	72	78	76	84	98.8	99.2	18	......	.....do	Cloudy, rain, warm.	One soft	Says he had a little dysentery yesterday; no untoward symptoms.
17	72.7	72	78	72	76	98.0	99.2	18	18	.....do	Cloudy, warm	.....do	Good health.
18	72.5	78	84	66	78	98.2	98.2	16	18	.....do	Cloudy, cool	.....do	Do.

Daily medical record. Subject V (A. M. N.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
July 19	72.5	76	88	60	75	98.0	98.2	18	18		Bright, warm	One soft	Three liquid stools to-day, due to watermelon eaten last night; bowel condition normal this evening; feels perfectly well.
20	72.9	72	80	72	78	98.2	98.0	16	18	Laboratory	Cloudy, warm	Three soft	Good health.
21	72.8	72	80	68	76	98.4	98.8	18	18	do	Bright, hot	One soft	Do.
22	72.8	60	76	76	84	98.4	98.8	18	18	do	Cloudy, warm	do	Do.
23	72.9	60	72	64	76	98.8	97.8	20	18	do	do	do	Do.
24	72.4	72	78	80	96	98.4	99.6	18	22	do	do	do	Perfect health.
25	71.9	76	84	80	96	98.6	98.6	20	18	do	Bright, warm	do	Do.
26	71.9	78	84	72	78	98.4	98.6	20	18		Bright, hot	do	Do
27	72.3	60	68	72	76	98.4	98.8	20	18	Laboratory	do	do	Do.
28	72.3	64	72	72	80	98.8	98.9			do	Cloudy, warm	do	Do.
29	71.8	60	72	84	92	98.6				do	Bright, hot	do	One liquid movement; no untoward symptoms; feels perfectly well.
30	72.6	72	80	64	76	98.6	98.9			do	Cloudy, hot	do	Perfectly well.
31	72.6	60	68	60	68	98.2	98.6			do	Bright, windy, cool.	do	Excellent.
Aug. 1	72.2	68	76	76	84	98.4	98.9			do	Bright, hot	do	Do.
2	72.7	72	88	68	76	98.9				do	Bright, warm	do	Do.
3	72.2	68	72	76	84	98.8	99.0		18	do	Bright, hot	do	Feels very well.
4	72.5	76	80	72	80	98.9	99.0		18	do	do	do	Excellent.
5	71.7	72	78	78	86	98.4	99.0	18	20	Handball, laboratory	do	do	Do.
6	72.7	78	84	66	78	98.8	98.4	18	18	Laboratory, handball	do	do	Do.
7	71.7	66	72	78	84	98.2	99.5	18	20	Laboratory	Bright, warm	Two soft	Do.
8	72.5	72	78	60	72	98.2	98.6	18	17	do	Bright, cool	One soft	Do.
9	72.1	72	78	72	78	98.6	98.6	16	18	Sunday	Bright, warm	Two soft	Do.
10	72.7	78	84	66	76	98.6	98.6	18	14	Laboratory	do	One hard	Do.
11	71.1	72	78	88	96	98.6	98.4	18	18	Laboratory, handball	Cloudy, warm	One soft	Excellent; handball before evening meal.
12	72.5	68	80	72	80	98.4	98.6	19	18	Laboratory	Rain, warm	do	Excellent.
13	72.9	72	78	72	84	98.4	98.6	18	14	do	Cloudy, warm	do	Do.
14	71.8	72	76	88	96	98.6	99.4	16	20	Laboratory, handball	Bright, warm	do	Do.
15	72.8	72	78	76	80	98.4	98.6	14	16	Laboratory	Showers, warm	do	Do.
16	72.6	78	84	76	84	98.8	99.6	18	18	Sunday	Bright, hot	do	Do.

	17	72.5	78	84	64	72	98.4	98.2	18	14	Laboratory	Cloudy, warm	do	Do.
	18	72.8	72	78	64	76	98.2	99.0	18	16	do	Bright, warm	do	Do.
	19	72.7	72	76	72	84	98.6	98.0	18	18	do	Cloudy, cool	do	Do.
	20	72.0	72	84	72	84	98.2	98.2	18	18	do	Bright, cool	do	Do.
	21	72.0	72	78	74	84	98.2	98.6	18	19	do	Bright, warm	Two soft	Do.
	22	72.3	60	74	84	90	98.0	99.2	18	22	do	Bright, cool	One soft	Excellent; handball 5 p. m.
	23	72.5	72	78	64	68	98.2	98.4	18	20	Sunday	do	Two soft	Excellent.
	24	72.5	72	78	74	84	98.0	98.6	18	20	Laboratory	do	do	Excellent; handball 5 p. m.
	25	72.2	72	76	78	84	98.2	98.2	18	16	do	do	do	Excellent.
	26	72.3	66	78	72	78	98.4	99.0	18	18	do	do	One soft	Do.
	27	72.5	72	78	78	84	98.6	99.2	18	20	do	Bright, hot	do	Do.
	28	72.5	72	78	76	80	98.4	98.6	19	20	do	Cloudy, warm	do	Do.
	29	71.8	72	78	78	90	98.6	100.2	18	22	do	Bright, hot	do	Excellent; handball 5 p. m.
	30	72.1	78	84	78	80	98.6	98.6	20	18	Sunday, handball	do	do	Excellent.
	31	72.2	72	78	80	84	99.0	99.2	18	18	Laboratory	do	do	Do.
Sept.	1	72.23	72	78	72	84	98.6	98.6	18	20	do	do	do	Do.
	2	71.3	60	68	84	96	97.8	98.8	18	24	Handball p. m., laboratory.	Bright, cool	do	Do.
	3	71.9	72	78	72	84	98.4	98.6	18	20	do	do	do	Do.
	4	72.45	72	78	72	76	98.4	99.4	18	20	Laboratory	Bright, hot	None	Do.
	5	72.34	74	84	72	84	98.6	99.0	18	20	do	do	One soft	Do.
	6	73.18	74	82	72	84	98.6	98.6	18	20	Sunday	do	do	Do.
	7	72.23	60	66	72	78	98.2	98.8	18	19	Holiday	do	do	Do.
	8	72.7	72	78	74	84	98.6	99.0	17	19	Laboratory	Bright, warm	One hard	Do.
	9	72.34	76	84	76	80	98.4	99.0	20	21	do	do	do	Do.
	10	72.7	72	84	78	90	98.8	99.0	20	21	do	Bright, hot	One soft	Do.
	11	72.8	68	76	76	90	98.4	99.2	20	22	do	do	do	Do.
	12	72.34	72	80	72	78	98.4	98.6	20	21	do	Bright, warm	Two soft	Do.
	13	72.34	76	84	72	84	98.6	98.4	18	19	Sunday	Smoky, warm	do	Do.
	14	72.0	74	82	76	84	98.8	99.2	18	16	Laboratory	Bright, smoky, warm.	One soft	Do.
	15	71.8	60	64	72	78	97.8	98.6	18	20	do	Bright, warm	do	Do.
	16	72.1	68	76	74	84	98.6	98.6	18	18	do	Bright, cool	do	Do.
	17	72.7	72	78	74	84	98.4	98.6	18	18	do	do	None	Do.
	18	72.3	64	74	72	80	98.6	98.6	18	20	do	Bright, warm	One soft	Do.
	19	72.3	84	94	74	84	99.0	98.6	18	20	do	do	do	Do.
	20	72.3	78	84	72	78	99.0	98.6	19	20	Sunday	Bright, hot	do	Do.
	21	73.0	78	86	76	84	99.0	98.8	19	20	Laboratory	do	do	Do.
	22	73.18	60	78	68	76	98.6	98.6	18	20	do	Cloudy, hot	do	Do.
	23	72.8	64	68	72	84	98.6	99.0	18	19	do	Bright, hot	One hard, one soft	Do.
	24	73.2	68	74	72	78	99.0	98.4	18	18	do	do	One soft	Do.
	25	72.23	72	76	74	84	99.0	99.0	18	19	do	do	do	Do.
	26	71.33	64	78	80	88	98.4	99.0	18	20	do	do	do	Do.
	27	71.8	68	80	76	80	98.4	99.2	18	20	Sunday	Bright, warm	do	Do.
	28	72.1	64	72	80	84	98.4	98.4	18	18	Laboratory	Cloudy, cold	do	Do.
	29	72.2	64	76	76	80	98.6	99.2	18	22	do	Bright, cool	do	Do.
	30	72.0	68	76	68	78	98.8	98.8	20	21	do	do	do	Do.
Oct.	1	72.4	68	84	78	84	98.6	98.8	20	20	do	Cloudy, cool	do	Do.
	2	72.8	72	84	72	84	98.4	99.0	21	21	do	Bright, cool	do	Do.
	3	72.7	68	80	66	72	98.6	99.2	21	20	do	do	None	Do.
	4	72.34	76	80	72	80	98.6	98.6	21	20	Sunday	Bright, warm	One soft	Do.
	5	72.7	78	84	72	80	98.8	98.6	20	21	Laboratory	do	do	Do.

Daily medical record. Subject V (A. M. N.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
Oct. 6	72.9	72	76	72	76	98.6	98.6	20	21	Laboratory and student.	Bright warm	One soft	Excellent.
7	72.9	72	80	78	84	98.8	98.6	21	22	do	do	do	Do.
8	72.56	76	80	68	74	98.8	98.0	21	20	do	Rain, cold	do	Do.
9	73.0	72	80	78	80	98.4	98.6	20	20	do	Bright, cool	do	Do.
10	72.5	76	84	76	86	98.6	99.0	20	21	do	do	do	Do.
11	72.45	76	84	78	90	98.4	98.6	19	21	Sunday	Bright, windy, cold.	do	Do.
12	72.7	72	84	68	80	98.6	98.4	19	20	Laboratory and student.	Bright, cool	do	Do.
13	72.7	76	84	80	84	98.6	98.6	21	20	do	do	do	Do.
14	72.7	68	76	80	84	98.4	97.8	20	21	do	Bright, warm	do	Do.
15	72.9	80	84	80	88	98.4	98.6	20	21	do	do	do	Do.
16	72.7	76	80	72	80	98.4	98.6	20	20	do	Bright, windy, warm.	do	Do.
17	72.45	68	76	80	92	98.2	99.2	19	22	do	Bright, warm	do	Do.
18	72.2	72	80	84	92	98.6	99.2	20	21	Laboratory, a. m.	Smoky, cool	do	Do.
19	72.7	80	92	68	76	98.6	98.4	20	21	Laboratory and student.	do	do	Do.
20	72.8	68	80	72	80	98.4	98.0	21	22	do	Bright, warm	Two soft	Do.
21	72.36	76	84	76	88	98.6	98.8	22	20	do	do	One soft	Do.
22	72.9	72	80	84	90	98.0	99.4	21	22	do	do	do	Do.
23	72.45	78	80	76	86	98.6	98.6	21	22	do	Cloudy, cool	do	Do.
24	73.0	76	90	64	76	98.8	98.6	21	21	do	do	do	Do.
25	72.56	78	86	76	86	98.4	98.8	21	20	Sunday	Cloudy, cold	One hard	Do.
26	72.45	72	84	72	80	98.6	98.4	20	......	Laboratory and student.	Rain, cold	One soft	Do.
27	72.45	84	90	70	72	98.6	98.6	20	19	do	do	do	Do.
28	72.45	72	80	72	80	98.6	98.6	20	19	do	Bright, cool	do	Do.
29	72.7	76	84	78	84	98.4	98.8	20	20	do	do	do	Do.
30	73.2	76	80	76	84	98.4	98.6	20	20	do	do	do	Do.
31	72.45	72	78	68	78	98.4	98.6	20	20	do	do	One hard	Do.

SUBJECT VI (C. H. S.).

													Movements.	
		Kilogms.												
July	1	....	72	87	78	84	......	......	15	......	Paper route, moderate.	Cloudy..........	One solid.....	Excellent.
	2	82.16	......	......	72	82	......	97.8	......	18	....do..........	Bright, warm...	None.......	Do.
	3	82.3	72	84	78	84	98.0	98.2	19	24	....do..........	Rain..........	One solid......	Do.
	4	81.7	76	84	76	84	98.0	98.2	18	24	....do..........	Bright, warm...	One soft.....	Do.
	5	81.7	(*a*)	(*a*)	78	84	......	98.0	(*a*)	24	....do..........	Bright, hot.....	One hard.....	Do.
	6	81.2	72	84	72	84	98.4	99.0	22	24	....do..........	Bright, cloudy, hot.	....do......	Do.
	7	81.9	78	84	68	76	97.4	98.4	24	18	....do..........	Cloudy, cool.....	One soft.....	Do.
	8	81.7	76	84	84	92	97.8	99.0	18	20	....do..........	Bright, warm...	Two soft....	Do.
	9	81.14	78	84	76	89	98.0	98.6	20	20	....do..........	....do.........	One soft...	Do.
	10	81.0	72	78	81	90	98.0	98.8	24	22	....do..........	....do.........	Two soft..	Do.
	11	80.8	78	84	72	80	98.4	99.2	20	24	....do..........	Bright, hot......	One hard.....	Do.
	12	80.4	78	84	78	84	98.2	98.0	20	18	....do..........	....do.........	One soft..........	Do.
	13	80.6	78	84	72	78	98.2	98.0	22	20	....do..........	Cloudy, hot.....	None.......	Do.
	14	80.8	72	78	66	78	97.4	98.0	24	20	....do..........	Clear, hot.......	One soft...	Do.
	15	80.4	72	78	72	78	98.4	98.2	22	21	....do..........	Bright, warm...	Two soft..	Do.
	16	80.8	72	78	72	78	98.2	98.4	20	20	....do..........	Cloudy, warm, rain.	One soft...	Excellent; in raising phlegm from throat brought a little blood; has done this frequently in past winter; throat and lungs normal.
	17	80.3	72	84	78	84	98.2	98.2	14	18	Newspaper and student.	Cloudy, warm...	....do......	No blood coughed up since.
	18	81.1	72	84	72	84	98.0	98.0	20	20	....do..........	....do.........	One hard......	Feels well.
	19	80.4	72	72	60	72	98.0	97.8	20	21	Sunday, newspaper...	Bright, warm...	One soft...	Do.
	20	80.8	66	78	66	78	98.4	98.0	20	21	Newspaper, student...	Cloudy, warm...	....do......	Do.
	21	80.8	66	78	66	78	98.0	98.0	21	18	....do..........	Bright, hot.....	....do......	Do.
	22	80.8	72	84	72	84	98.2	98.6	20	21	....do..........	Cloudy, warm...	....do......	Do.
	23	81.2	72	84	60	66	98.4	98.4	20	18	....do..........	....do.........	....do......	Do.
	24	80.5	66	78	74	84	98.4	98.6	22	20	....do..........	....do.........	....do......	Perfect health.
	25	80.2	72	84	72	84	98.2	98.4	20	21	....do..........	Bright, warm...	....do......	Coughed up more blood in raising mucus from throat; lungs and throat O. K.; feels perfectly well.
	26	80.2	72	84	72	84	98.2	98.2	20	18	Sunday..........	Bright, hot...	Two soft........	Lungs and throat in normal condition; voice sounds slightly louder over right apex than over left, but no rales, fremitus, or bronchial breathing; feels perfectly well.
	27	80.7	72	78	66	72	98.2	98.4	22	21	Newspaper, student...	....do.........	None..........	Feels perfectly well.
	28	81.0	60	72	66	78	98.2	98.6	21	20	....do..........	Cloudy, warm...	One soft........	Do.
	29	80.7	66	72	72	84	98.0	98.6	21	20	....do..........	Bright, hot.....	....do......	Do.
	30	80.5	72	78	66	84	98.4	98.4	20	18	....do..........	Cloudy, hot.....	Two soft........	Do.
	31	80.4	60	72	60	72	98.8	98.4	20	22	....do..........	Cloudy, windy, cool.	None..........	Excellent.
Aug	1	80.7	72	78	72	84	98.8	98.2	20	18	....do..........	Bright, hot.....	One soft..........	Had more blood in mouth this evening; may come from tooth. (Subject's statement.)

a Absent.

Daily medical record. Subject VI (C. H. S.)—Continued.

Date.	Weight, 6 p. m.	Pulse. 12 m. Sitting.	Pulse. 12 m. Standing.	Pulse. 6 p. m. Sitting.	Pulse. 6 p. m. Standing.	Temperature. 12 m.	Temperature. 6 p. m.	Respiration. 12 m.	Respiration. 6 p. m.	Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
	Kilogms.											*Movements.*	
Aug. 2	81.1	60	72	78	84	98.2	98.0	20	18	Newspaper	Bright, warm	One soft	Excellent.
3	80.7	78	84	72	78	98.0	98.2	20	18	Newspaper and student.	Bright, hot	do	Physical examination negative; feels very good.
4	80.9	66	78	66	74	98.2	98.6	18	20	do	do	do	Excellent.
5	80.5	78	84	66	78	98.0	98.0	20	21	do	do	One hard	Do.
6	80.3	66	72	60	72	98.0	97.6	18	19	do	do	One soft	Excellent; tasted a little blood in his mouth.
7	81.1	60	72	60	72	98.4	97.8	18	21	do	Bright, warm	do	Excellent.
8	80.1	72	84	66	78	98.2	98.2	20	21	do	Bright, cool	do	Do.
9	80.5	72	84	72	84	97.6	98.2	20	22	Newspaper	Bright, warm	do	Do.
10	80.9	66	72	66	78	97.6	97.8	18	20	Newspaper and laboratory.	do	do	Do.
11	80.8	72	84	72	84	98.0	97.8	18	18	do	Cloudy, warm	do	Do.
12	81.1	66	78	66	78	98.0	97.8	18	18	do	Rain, warm	do	Do.
13	81.1	66	72	72	84	97.8	98.0	16	18	do	Cloudy, warm	do	Do.
14	81.3	72	84	60	72	98.0	98.4	18	18	do	Bright, warm	do	Do.
15	80.8	72	84	90	96	97.6	98.9	18	21	do	Showers, warm	do	Do.
16	80.0	78	84	84	90	97.6	99.0	20	21	Newspaper	Bright, hot	One hard	Do.
17	81.3	62	72	66	98	98.0	98.4	18	20	Newspaper and laboratory.	Cloudy, warm	One soft	Do.
18	82.0	72	84	66	78	97.6	98.6	18	22	do	Bright, warm	Two soft	Excellent; had some griping pains in bowels this a. m. before bowel movement.
19	81.1	72	78	60	72	97.6	97.8	18	16	do	Cloudy, cool	One soft	Excellent.
20	81.7	60	72	60	66	97.8	97.4	18	20	do	Bright, warm	do	Do.
21	81.7	60	66	60	72	97.8	98.0	18	18	do	Bright, cool	None	Do.
22	80.7	60	66	66	78	97.8	98.0	18	20	do	do	One soft	Do.
23	80.3	60	66	72	78	97.0	97.4	20	20	Sunday newspaper	do	do	Do.
24	81.1	72	78	66	72	97.4	97.6	18	20	Newspaper and laboratory.	do	do	Do.
25	81.0	72	78	66	78	97.8	97.6	20	20	Laboratory	do	Two soft	Do.
26	81.3	66	72	78	84	97.8	98.2	18	20	do	do	One soft	Do.
27	81.3	66	72	72	78	97.8	98.4	18	18	do	Bright, hot	do	Do.
28	81.2	72	78	78	84	98.0	98.2	18	20	do	Cloudy, warm	do	Do.
29	80.7	72	78	84	96	98.2	98.4	18	22	do	Bright, hot	None	Do.
30	80.7	88	92	84	96	98.2	98.2	20	22	Sunday newspaper	do	One soft	Do.

	31	80.7	78	84	78	84	97.8	98.8	22	21	Laboratory and newspaper.	....do....	....do....	Do.
Sept.	1	81.1	72	84	66	78	98.4	97.6	20	20	....do....	....do....	....do....	Do.
	2	81.0	60	72	60	66	97.4	97.4	18	18	....do....	Bright, cool....	....do....	Do.
	3	80.88	72	78	60	66	98.0	97.6	20	16	....do....	....do....	None....	Do.
	4	80.88	78	84	72	84	97.4	98.2	20	20	....do....	Bright, hot....	One hard....	Do.
	5	81.1	72	84	a 90	a 96	97.8	98.2	21	20	....do....	....do....	One soft....	Do.
	6	81.44	72	84	78	84	98.0	98.0	21	21	Sunday newspaper....	....do....	One hard....	Do.
	7	80.65	72	84	72	78	98.2	98.2	20	19	Holiday, newspaper....	....do....	One soft....	Do.
	8	81.44	72	78	66	78	98.2	97.8	18	21	Laboratory and newspaper.	Bright, warm....	....do....	Do.
	9	81.44	78	90	84	90	98.2	98.6	20	20	....do....	....do....	One hard....	Do.
	10	81.0	72	78	66	72	98.4	98.2	21	20	....do....	Bright, hot....	....do....	Brought up more blood with phlegm in morning; throat hyperemic; excellent general condition.
	11	81.1	72	78	72	84	98.6	98.2	21	20	....do....	....do....	....do....	Excellent
	12	80.9	72	78	78	90	98.6	98.4	21	21	....do....	Bright, warm....	None....	Do.
	13	80.77	78	90	72	78	98.8	98.4	21	21	Sunday....	Smoky, warm....	One soft....	Do.
	14	81.1	76	88	72	78	98.0	98.2	20	19	Laboratory and newspaper.	Bright, smoky, warm.	None....	Do.
	15	80.9	72	90	72	84	98.0	97.4	20	20	....do....	Bright, warm....	One soft....	Do.
	16	80.65	66	78	72	78	98.0	98.0	21	20	....do....	Bright, cool....	None....	Do.
	17	80.9	66	78	72	78	98.0	98.4	20	21	....do....	....do....	One soft....	Do.
	18	80.9	78	84	66	78	98.6	98.6	20	20	....do....	Bright, warm....	One hard, one soft....	Do.
	19	81.0	66	78	84	96	98.4	99.0	21	21	....do....	....do....	One hard....	Do.
	20	81.3	72	84	72	90	97.6	97.8	21	21	Sunday....	Bright, hot....	One hard, one soft....	Do.
	21	82.23	72	90	72	84	97.8	98.4	20	20	Laboratory and newspaper.	....do....	None....	Do.
	22	82.2	72	78	72	78	98.4	98.4	20	21	....do....	Cloudy, cool....	One soft....	Do.
	23	82.85	78	90	74	86	98.0	97.8	20	20	....do....	Bright, hot....	....do....	Do.
	24	81.8	72	78	72	84	99.0	98.4	18	21	....do....	....do....	....do....	Do.
	25	81.33	72	84	78	84	98.4	98.4	20	21	....do....	....do....	....do....	Do.
	26	80.88	78	84	72	90	98.2	99.0	20	20	....do....	....do....	....do....	Do.
	27	80.88	72	84	72	78	98.4	98.6	20	20	Sunday, newspaper....	Bright, warm....	One hard, one soft....	Do.
	28	81.1	72	84	78	84	98.4	98.6	20	21	Laboratory and newspaper.	Cloudy, cold....	One soft....	Excellent; complains of being tired for past week; has had an unusual amount of janitor work to perform.
	29	81.8	78	90	76	84	98.4	98.2	20	20	....do....	Bright, cool....	....do....	Excellent.
	30	81.9	78	84	72	78	98.0	97.0	20	21	....do....	....do....	....do....	Do.
Oct.	1	82.0	78	84	78	90	98.2	98.0	20	20	Laboratory and newspaper.	Cloudy, cool....	....do....	Do.
	2	81.8	66	78	66	72	98.0	97.8	20	21	....do....	Bright, cool....	....do....	Do.
	3	80.9	78	84	84	90	98.6	98.6	20	21	....do....	....do....	....do....	Do.
	4	82.0	78	96	90	96	98.2	98.4	20	24	Sunday, newspaper....	Bright, warm....	....do....	Do.
	5	81.8	76	84	92	96	98.0	98.4	20	22	Laboratory and newspaper.	....do....	....	Do.
	6	82.4	66	72	72	84	97.8	98.0	19	20	Student and newspaper.	....do....	One soft....	Do.
	7	81.8	72	78	78	96	97.4	98.2	20	21	....do....	....do....	....do....	Do.

[a] After fast exercise.

Daily medical record. Subject VI (C. H. S.)—Continued.

Date.	Weight, 6 p. m.	Pulse.				Temperature.		Respiration.		Exercise or work.	Weather.	Condition of bowels preceding 24 hours.	Daily medical condition and notes.
		12 m.		6 p. m.		12 m.	6 p. m.	12 m.	6 p. m.				
		Sitting.	Standing.	Sitting.	Standing.								
	Kilogms.											*Movements.*	
Oct. 8	82.45	66	72	66	78	98.2	98.0	20	21	Student and newspaper.	Rain, cold	One soft	Excellent.
9	82.45	90	96	72	78	98.4	97.8	20	21	do	Bright, cool	do	Do.
10	82.45	78	84	78	96	98.2	97.4	20	22	do	do	do	Do.
11	82.45	72	78	78	90	98.4	97.4	20	21	Sunday	Bright, windy, cold.	do	Do.
12	83.1	78	96	84	96	97.6	96.4	20	20	Newspaper and student.	Bright, cool	do	Do.
13	83.1	72	90	66	78	97.4	97.6	20	19	do	do	None	Do.
14	82.9	78	84	84	90	98.0	98.6	19	21	do	Bright, warm	One soft	Do.
15	82.9	66	72	66	84	97.2	97.6	19	20	do	do	do	Do.
16	83.1	90	96	78	90	97.0	97.4	22	20	do	Bright, windy, warm.	do	Do.
17	83.1	78	84	96	108	97.6	99.6	19	21	do	Bright, warm	One hard	Do.
18	82.9	84	90	84	92	97.4	98.0	19	20	Newspaper and recreation.	Smoky, cool	One soft	Do.
19	83.1	84	90	60	78	97.0	98.0	20	21	Newspaper and student.	do	do	Do.
20	82.9	90	108	66	72	98.0	97.8	20	21	do	Bright, warm	do	Do.
21	83.1	78	90	84	90	98.4	98.4	21	22	do	do	One hard	Do.
22	84.4	66	78	72	90	98.4	98.6	20	21	do	do	do	Do.
23	83.1	60	66	66	78	98.4	98.4	21	21	do	Cloudy, cool	One soft, one hard	Do.
24	82.9	78	90	62	76	98.8	98.4	20	20	do	do	One soft	Do.
25	82.9	90	96	72	90	98.0	98.4	21	20	Sunday	do	do	Do.
26	83.1	72	84	66	72	98.2	98.2	20	20	Newspaper and student.	Rain, cold	do	Do.
27	82.9	72	78	66	72	98.0	98.2	20	20	do	do	do	Do.
28	83.1	66	72	72	78	98.2	98.4	20	19	do	Bright, cool	do	Do.
29	83.1	78	90	72	78	98.4	98.2	20	19	do	do	None	Do.
30	83.1	72	78	84	90	98.4	98.2	19	18	do	do	One soft	Do.
31	84.7	76	84	72	84	98.4	98.6	19	19	do	do	do	Do.

MEDICAL REPORT.

From the data collected by Doctor Buhlig and presented in the tables just given certain conclusions may be drawn. The facts are tabulated at considerable length, which may seem unnecessary, but it has been our aim to give all the facts observed which in any way lead to a correct judgment as to the condition of the men during the period of the investigation. This very full record enables us to reach the following conclusions:

It is at once evident that no marked change of any kind has taken place in the men during the season. In all cases but one there has been a slight gain in weight over that at the beginning, which relations are shown in this way, in kilograms:

	Subject I.	Subject II.	Subject III.	Subject IV.	Subject V.	Subject VI.
Beginning weight	65.9	68.9	72.9	66.9	73.4	82.1
End weight	66.1	69.5	75.2	70.4	72.5	84.7
Maximum weight	66.4	70.0	75.2	70.4	73.7	84.7
Minimum weight	63.1	66.4	70.9	66.0	71.1	80.0

For Subject No. I the lowest weight was reached about the middle of October, at the time when he was undergoing a severe mental strain. For the other men the minimum weights were reached in July and August, during a time of extremely hot weather. The benzoate dosage was also the lowest at this time.

PULSE, TEMPERATURE, AND RESPIRATION.

The changes here are in general slight, without systematic variations. The exceptions are these:

No. I felt unwell on August 25 to 27 from what appeared to be an intestinal intoxication. His temperature went up to 101.8, with corresponding pulse and respiration. He suffered from headache and lumbar pains at the same time, but soon recovered.

No. IV showed a slightly elevated temperature on October 15, lasting a few hours after the evening meal; no definite symptoms.

No. V occasionally showed a temperature as high as 99.6 in the evening. On August 29 it was 100.2, but this was taken after a brisk handball game.

BOWEL MOVEMENTS.

In general the movements were softer toward the end of the investigation than at the beginning. This was especially noticeable with No. II and No. IV, who at the start suffered sometimes from constipation. An occasional case of diarrhea was reported from the squad, but these were of short duration; the causes were usually unknown.

DAILY MEDICAL CONDITION.

In general this was good throughout the time of the experiments. Attention may be called to the exceptions recorded:

Subject No. I had duties connected mainly with the morgue of the school, and during the summer was obliged to handle a great deal of old dissecting material, during a general cleaning-up process. In this he was exposed to frequent extreme changes of temperature, which doubtless caused some of the unpleasant symptoms complained of and recorded. During the summer he had much trouble with his eyes, and at the time of an examination homatropine was instilled into them. This had been done also on a former examination, and at both times he was rendered temporarily unwell. During the last part of the period of observation the subject labored much of the time under a severe nervous strain, which was finally discovered to be from anxiety on account of the condition of his mother, who was ill in a distant State. News of her death on October 15 was followed by a time of headaches and general depression on the part of the subject, which led to irregularities in appetite, suggested by some of the tables given.

Nothing unusual was noted in the general condition of Subjects II and III.

For No. IV the condition was generally good. On August 2 he had a vomiting spell, for which no cause could be discovered. On several occasions he complained of a headache which seemed to be due to attempts to dispense with his glasses.

No. V had been in generally good condition during the summer. A diarrhea reported on July 19 seemed to be due to watermelon.

No. VI must be described as in excellent condition throughout the season. The occasional presence of a little blood brought up with phlegm has no bearing on the present inquiry.

GENERAL FECES AND URINE.

These conditions have already been commented upon. It is evident that no changes were noted here which may be attributed to the preservative employed.

CERTAIN FURTHER DATA.

The men who served as subjects during the period of four months have all been under my observation until the time of making this report. No ill effects of any kind have been noticed in any case, and it is safe to say that they are now, and have been since the end of the experiments, in good physical condition. On December 22 a complete medical examination was made by Doctor Buhlig, which follows. It will be seen that the results of this suggest conditions which are in no wise abnormal.

Medical examination of December 22, 1908.

	Subject I (H. N. B.).	Subject II (W. W. C.).	Subject III (A. G.).	Subject IV (O. F. L.).	Subject V (A. M. N.).	Subject VI (C. H. S.).
Weight (kilos)	66.6	71.4	73.8	68.8	71	79.8.
Heart	Negative	Negative	Negative	Slight enlargement to the right; faint systolic blow at apex occasionally; otherwise negative.	Reduplication of second pulmonic; otherwise negative.	Reduplication of second pulmonic; otherwise negative.
Pulse	78	72	84	66	72	78.
Character of pulse	Full; regular	Full; regular	Full; regular	Full; regular	Full; regular	Small; regular.
Temperature	97.4	98.6	98.6	97.6	98.4	97.8.
Respiration	20	16	21	8	20	18.
Lungs	Negative, except slight roughened breath sounds over right apex.	Negative	Negative	Negative, except right apex less resonant than left.	Negative	Negative.
Liver	Negative	do	Palpable, not tender; percussion negative.	Palpable, not tender; otherwise negative.	do	Do.
Spleen	do	do	Negative	Negative	do	Do.
Abdomen	do	do	do	do	do	Do.
Lymph nodes	do	do	do	do	do	Do.
Thyroid	do	do	do	do	do	Do.
Nose and throat	Tonsils hyperemic; otherwise negative.	do	Fauces hyperemic; otherwise negative.	Sore throat; pharynx hyperemic; negative.	do	Throat hyperemic; negative.
Reflexes	Normal	Brisk	Brisk	Normal	Brisk	Normal.
Condition last two months	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent; has had no blood in phlegm.
Urine:						
Albumin						
Sugar	Negative	Negative	Negative	Negative	Negative	Negative.
Acetone						
Normal reduction, in terms of glucose (Pavy-Long) per cent.	0.14	0.14	0.21	0.12	0.24	0.24.
Microscopic	Amorphous urates; calcium oxalates; few mucous shreds.	4 to 5 pus cells per high power field; few mucous shreds; occasional epithelial cell.	Many mucous shreds; few pus cells; few epithelial cells; one hyaline cast.	Few mucous shreds; few epithelial cells.	Two hyaline casts; many mucous shreds; few epithelial cells; few amorphous urates.	8 to 10 pus cells per high power field; many mucous shreds; few epithelial cells.

During the progress of the routine observations one of the men on the squad, doing also laboratory work, A. M. N., carried out occasional tests on the urine in addition to those regularly reported. These were concerned with the so-called normal reduction of the urine—that is, the reducing power toward very sensitive ammoniacal copper solutions, which is recognized in all normal urines, but which is too slight to be quantitatively followed with the Fehling solution. About 20 tests were made on the urine of each man, beginning with the end of the last fore period and ending about the middle of the last high-preservative period. Such tests form a part of the routine work in my laboratory, and it is interesting to note that the results here obtained were in no wise different from those recorded from the normal men. While the reducing power varied from individual to individual, as is the ordinary condition, there were no systematic variations indicating any increase or decrease in this factor between the beginning of the low preservative periods and the end of the high preservative periods. The reducing powers were all within the limits accounted for by the creatinine, uric acid, and traces of carbohydrates or carbohydrate derivatives always present.

A further point must be recalled here. Two men who had been on the squad followed up the same diet under the same general conditions for a week longer, and took daily increased amounts of benzoate beginning with 5 grams and ending with 10 grams on the last day of the experiment. At the same time a third man, who had not been on the squad, but was a member of the laboratory force, had assisted in the weighing of the food, had followed essentially the same diet, and lived under the same general routine as the squad members, began with a dose of 5 grams and ended with 7.5 grams. Certain tests were made on the urines of the three men; these were for uric acid, creatinine, and normal reduction. For the two who had been under observation before, the uric acid and creatinine were found to be unchanged from the former normals. A trifling increase in the normal reduction seemed to result here, but not sharp enough to be definitely asserted. Nothing abnormal was found in the condition of the urine of the third man.

The facts of greatest importance, however, are these: The doses taken by the three men were relatively large, from the ordinary standpoint, yet no disagreeable effect of any description followed. There was no loss of appetite, no nausea, no headaches, and no intestinal disturbances which could be discerned. The men spoke of themselves as feeling perfectly well. It is true that much larger doses have been given medicinally, and for longer periods, without recorded ill effects. From the size of medicinal doses, our routine doses must be considered as small, although very large as viewed from the point of use in the preservation of food.

GENERAL CONCLUSIONS.

In the preceding pages I have presented various kinds of data bearing on the question of the action of sodium benzoate on the human organism. In the chemical determinations on the urine and feces it was not found that any change in the normal metabolism followed; there was no alteration in the distribution of the nitrogen of the urinary constituents, and no decrease in the utilization of the protein or fat of the food. I am unable to find any alterations in the qualitative composition of the urine as shown by the various special tests made.

In the bacteriological and other tests carried out in the feces, which were extended to a considerable length, no essential change from the beginning of the fore period to the end of the high preservative period was discovered. There were fluctuations, but they were not systematic, and varied with the individuals rather than with the dosage. It is fair to conclude that the action of the benzoate, in the amounts used, on the intestinal activities or on the characteristic flora must be, at most, extremely slight.

The prolonged clinical observations recorded are intended to show clearly the actual conditions of the men from day to day. I consider them of equal importance with the chemical tests made, for the purpose of this inquiry. But one conclusion may be drawn from them, and that is that the health of the men has suffered no impairment through the use of the benzoate in the period of the observations. I believe, further, that the period is long enough to show change were it likely to occur.

In conclusion it must be said, then, that the experience in our laboratory justifies the statement that the moderate addition of sodium benzoate to our food, up to at least 1 gram daily, does not give rise to any abnormal conditions in the subject, or lead to any changes in metabolism which may be detected with the means at our command.

It follows, further, from the same observations, that such addition of benzoate to the food does not lower its value by robbing it of any element, by diminishing its digestibility, or by introducing a factor which modifies in any discoverable way the normal metabolism. The quality or strength of the food is not lowered or injuriously affected through the presence of the preservative, and this is true for large quantities as well as for small, since the amounts of preservative used in our experiments must all be considered large from the standpoint of actual use.

CHICAGO, *January 15, 1909.*

THE ACTION OF SODIUM BENZOATE ON THE HUMAN BODY.

By DR. CHRISTIAN A. HERTER.

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By Dr. Christian A. Herter.

The investigation about to be reported is one of three carried on by the United States referee board of scientific experts under a request from the Secretary of Agriculture. The investigation was planned by the referee board. The chemical work was done under the personal direction of Dr. Alfred J. Wakeman, who was assisted by the following persons: Dr. H. D. Dakin, Dr. Helen Baldwin, Samuel C. Harvey, Dr. A. I. Ringer, Dr. D. R. Lucas, E. N. O'Brien, P. S. Kober, and M. Fine. The bacteriological work on the feces was done by Dr. William R. Williams. The study of the blood and the gastric contents was carried on by Dr. J. S. Thacher, with the aid of Dr. L. R. Williams, Dr. A. C. Crump, and Miss S. Granat.

Its object, like that of the other investigations by the referee board, was to ascertain the influence of large and small doses of sodium benzoate on the human organism. The investigation naturally involved the consideration of a variety of physiological processes. In the present report these observations will be classed under the following heads:

I. General medical notes.
II. Analytical data relating to the urine and the feces.
III. Fats and fat balance.
IV. General urinary examination.
V. Special urinary examination for benzoic acid.
VI. Special chemical examination of the feces.
VII. Bacteriological examination of the feces.
VIII. Caloric values of the foodstuffs.
IX. Special clinical data.
X. Summary of conclusions from each case.
XI. Summary of conclusions from the entire group (four cases).
XII. Methods of analysis and examinations.

It has been considered best to present the numerous results involved in this investigation according to the findings obtained in each experimental subject. In the present investigation four subjects were employed. It was deemed advisable to consider the results in each

case under four distinct divisions corresponding to the various periods of the experiment, namely, (1) the fore period, (2) the low benzoate period, (3) the high benzoate period, and (4) the after period. The conclusions from the data relating to each case are separately stated and from these conclusions from the individual cases are derived the conclusions applicable to the entire group.

CASE I R.

GENERAL MEDICAL NOTES.

The subject of this experiment was a physician 25 years of age and in good health, though somewhat undernourished. During previous summers he had shown a slight tendency toward loss of weight, without any accompanying disorders of digestion. During the experiment with which we are here concerned he led an absolutely regular and normal life. He had about seven hours of sleep out of the twenty-four, took exercise daily for one or two hours (walking) and on Sundays played tennis for about two hours in the morning. He took a daily morning bath at a temperature of 20° to 25° C.

The course of the benzoate experiment was eventless in this case so far as any symptoms of deranged function are concerned. The subject remained well throughout the entire period of the experiment. There was no disorder of digestion, nor of nervous function.

The daily dose of sodium benzoate was 0.3 gram during the low benzoate period. During the high benzoate period it ranged from 0.6 gram to 6 grams per day.

ANALYTICAL DATA RELATING TO THE URINE AND THE FECES.

Considering first the facts relating to the urine and to the feces, we may arrange these facts in their relation to the following subjects: Volume of the urine; specific gravity; total nitrogen; nitrogen balance; nitrogen of urea; nitrogen of ammonia; purin nitrogen; uric acid nitrogen; creatinin nitrogen; hippuric acid nitrogen; undetermined nitrogen; total sulphur; inorganic sulphur; ethereal sulphur; neutral sulphur; phosphorus; indican; indolacetic acid; aromatic oxyacids; chlorine; reaction of the urine. In the present connection we may consider also the following facts in regard to the feces: Weight of fresh feces; weight of dried feces; water; total nitrogen; ethereal extract.

THE URINE.

VOLUME.

The volume of the urine (Series A, I R) varied between 500 c. c. and 1,960 c. c. daily. The variations in volume were irregular throughout the periods of large and small dosage and can not be regarded as hav-

ing any significance in relation to the present question, since variations in temperature, moisture, conditions of bodily activity, etc., are sufficient to account for the differences noted, all of which must be regarded as being well within the normal limits.

SPECIFIC GRAVITY.

The specific gravity of the urine (Series A, I R) varied from 1.017 to 1.035. Like the volume of the urine, the specific gravity can not be considered to possess any significance in relation to the present investigation, since the values obtained all lie within the limits observed for normal persons. The average high specific gravity is doubtless to be referred in part to the influence of the warm weather during which a considerable part of the investigation was carried on.

TOTAL NITROGEN.

The total nitrogen was in general not determined daily, but the figures in the table represent the averages of groups of two or three days. In some instances the total nitrogen was determined daily. Reference to the complete analytical charts (Series A, I R, subperiods 1 to 18, inclusive) will show these details.

The observations on the urines are conveniently grouped under the various periods of the experiment, namely, the "fore period," the "low benzoate period," the "high benzoate period," and the "after period." In the interest of clearness and brevity the averages for these periods have been calculated and tabulated. Such comments on the tables as seem desirable are confined to the averages. (See Series B, showing actual values, and Series D, showing averages of percentages.) This holds true not only of total nitrogen, but also of all other analytical observations.

In Case I R (see Series B, I R) the average daily excretion of total nitrogen for the fore period was 9.64 grams; for the low benzoate period, 10.9 grams; for the high benzoate period, 12.8 grams, and for the after period, 12.3 grams. This slight rise in the high benzoate period and in the after period corresponds to an increase in the intake of nitrogenous food. (See Series F, I R.) It is desirable to note this rise in the nitrogen output, inasmuch as there is a corresponding rise in other constituents of the urine dependent on protein metabolism, namely, sulphuric and phosphoric acids.

NITROGEN BALANCE.

The data relating to the nitrogen balance are given in a special table (Series F, I R), to which the reader is referred for details. Only the average daily nitrogen balance for the four different periods of the experiment need be considered here. The average daily nitrogen balance for the fore period was positive (i. e., the intake

exceeded the output) and equaled 2.85 grams, for the low benzoate period it was positive and equaled 1.03 grams, for the high benzoate period it was positive and equaled 1.06 grams, and for the after period it was positive and equaled 0.76 gram. There is thus for each period a small positive balance.

It may be further noted that the average daily intake of nitrogen in the food varied within very narrow limits for the different periods as follows:

	Grams.
Fore period	14.36
Low benzoate period	13.5
High benzoate period	15.04
After period	14.33

There is no evidence, from any data given in this table, that there was any disturbance in nitrogenous metabolism during any of the periods of this experiment.

NITROGEN OF UREA.

An inspection of the figures contained in the column giving the actual daily excretion of urea clearly shows that these values all lie well within the limits recognized as characteristic of normal conditions. Moreover, there are no abnormal or wide variations in the relation of urea nitrogen to the total nitrogen for the different periods. The average nitrogen of urea for the fore period is 83.5 per cent of the total nitrogen (see Series D, I R); the average nitrogen of urea for the eight subperiods constituting the period of low benzoate dosage is 82.1 per cent of the total nitrogen. During the period of high benzoate dosage, taken as a whole, we have an average excretion of nitrogen of urea amounting to 84.4 per cent of the total nitrogen. For the after period the average excretion of urea nitrogen amounts to 84.5 per cent of the total nitrogen. The slightly higher averages observed for the period of large benzoate dosage and the after period as compared with the earlier periods is so small as to lack significance.

NITROGEN OF AMMONIA.

A study of the ammonia of the urine is especially facilitated by the examination of the table relating to percentages. (Series D, I R.) The figures for the absolute amounts, unless extremely high or extremely low, lack meaning. The average nitrogen of ammonia for the fore period is seen to be 4.1 per cent of the total nitrogen; for the low benzoate period, 4 per cent; for the high benzoate period, 3.9 per cent; and for the after period, 3.6 per cent. These percentages all vary within the limits observed in normal persons on ordinary mixed diet.

Slight variations observed from day to day may be interpreted as the result of a slight difference in diet. It is known that the use of a meat diet tends to increase the percentage of nitrogen of ammonia in the urine. There is no indication, however, of an increase in the percentage of nitrogen of ammonia during either the low or the high benzoate periods. The figures showing the average daily amounts of nitrogen of ammonia excreted during the various periods of the experiment are as follows (Series B, I R): For the fore period, 0.40 gram; for the low benzoate period, 0.44 gram; for the high benzoate period, 0.50 gram; for the after period, 0.45 gram.

TOTAL PURIN NITROGEN.

What has been said of the nitrogen of ammonia applies equally to the purin bases. A study of the percentages, like a study of the absolute amount of nitrogen included under purin nitrogen, fails to show any significant changes either for the low or the high benzoate periods. The averages of purin nitrogen for the different periods are as follows (Series D, I R): Fore period, 1.9 per cent of the total nitrogen; low benzoate period, 1.9 per cent; high benzoate period, 1.8 per cent; after period, 2 per cent. These figures may be regarded as expressing a close uniformity in the excretion of purin nitrogen for the different periods. The subperiods also show only small variations.

NITROGEN OF URIC ACID.

The uric acid, like the ammonia and purin bases, can be most advantageously studied in its percentage relations. (Series D, I R.) It is seen that the average nitrogen of uric acid in the four different periods of the experiment bears exactly the same relation to the total nitrogen. The average percentage of the total nitrogen for each period is 1.6. The variations for the subperiods are small. There is a slight absolute rise in the uric acid of the low and the high benzoate periods. (Series B, I R.) We may conclude that the use of sodium benzoate has been without discernible effect on the uric acid excretion.

NITROGEN OF CREATININ.

An inspection of the column devoted to creatinin nitrogen in the table of percentages (Series D, I R) indicates only slight variations in the average percentages at the different periods. This is likewise true of the results giving the total amount of nitrogen of creatinin. (Series B, I R.) There is, however, a slight rise in the daily average of creatinin for the later periods. For the fore period the average daily excretion was 0.42 gram; for the low benzoate period, 0.46 gram; for the high benzoate period, 0.49 gram; for the after period, 0.47 gram. The slight increase of creatinin in the later periods is probably referable to the slight increase in the intake of meat proteins.

NITROGEN OF HIPPURIC ACID.

The nitrogen of hippuric acid one would naturally expect to show an increase dependent on the administration of sodium benzoate, in accordance with the well known fact that hippuric acid is formed in the body by the pairing of benzoic acid with glycocoll and that most of the benzoic acid ingested is excreted by the kidneys in this combination. In this research hippuric acid is of interest only in so far as it represents the elimination of benzoic acid, and for this reason the figures in the tables to be alluded to represent only the benzoic acid moiety of the hippuric acid molecule. An increased excretion of hippuric acid is observable from period to period, with the increase in the administration of sodium benzoate. An instructive statement of the influence of sodium benzoate on the output of hippuric acid is seen in the table (Series E, I R) which represents the daily average of benzoic acid (calculated from the nitrogen of the hippuric acid of the urine) excreted during the fore period, the benzoate period, and the after period. The table shows also the amount of sodium benzoate ingested in the different periods expressed in terms of benzoic acid.

The essential features of this table are the following: During the low benzoate period the average daily dose of benzoic acid introduced was 0.2541 gram. The benzoic acid eliminated during the fore period was 0.3053 gram. In other words, the calculated amount excreted somewhat exceeds the actual amount taken. During the high benzoate period the daily excretion of benzoic acid for the entire period was 1.573 grams. The calculated amount of benzoic acid excreted daily during this period, after deducting the normal daily amount of the fore period, is 1.5611 grams. Here, then, there is a close correspondence between the amount of benzoic acid excreted and the amount administered.

It should be noted also that the after period of fourteen days shows an average daily benzoic acid excretion of 0.1538 gram.

UNDETERMINED NITROGEN.

We may consider the undetermined nitrogen in terms of its relation to the total nitrogen. (Series D, I R.) During the fore period, the average percentage of undetermined nitrogen amounted to 5.6 per cent of the total nitrogen; for the low benzoate period, to 7 per cent; for the high benzoate period, to 3.9 per cent; and for the after period, to 5.5 per cent. It can not be said that these variations possess any significance in relation to the benzoic acid ingested. The considerable variations in undetermined nitrogen which are so commonly observed are explainable to some extent by the fact that the undetermined nitrogen is estimated by difference.

TOTAL SULPHUR.

The average daily total output of sulphur excretion in the urine (Series B, I R) for the fore period was 0.710 gram; for the low benzoate period, 0.807 gram; for the high benzoate period, 0.947 gram; for the after period, 0.816 gram. As this increase for the late periods seems roughly parallel to the total nitrogen excretion, it may fairly be attributed to the increased ingestion of protein food.

INORGANIC SULPHUR.

The average percentage (Series D, I R) of inorganic sulphur for the fore period was 78.4 per cent of the total sulphur; for the low benzoate period, 79.3 per cent; for the high benzoate period, 80.7 per cent; for the after period, 81.5 per cent. These variations are so slight as to be insignificant.

ETHEREAL SULPHUR.

The relation of the ethereal sulphur to the total sulphur as expressed in percentages for the various periods will be found in the table of percentages. (Series D, I R.) It is more instructive to consider the ratio of inorganic and ethereal sulphur, especially if one is accustomed to gauge the intensity of putrefactive processes through the use of this ratio. It may be noted that the ratio of inorganic to ethereal sulphur for the fore period was 17.1; for the low benzoate period, 15.9; for the high benzoate period, 20.7, and for the after period, 15.3. These variations are too small to be significant. The actual ratios for the different periods are all within the limits of health. It is perhaps worth while to mention that the highest ratio—that is, the least proportion of ethereal sulphur—was observed during the period of highest benzoate consumption. In other words, during the period of highest benzoate consumption there appears to have been a slight fall in intestinal putrefaction as gauged by this ratio. The rise in indican (Series A, I R) noted in the high benzoate period seems contradictory to the ratios given above, but a close correspondence is not to be expected.

PHOSPHATE PHOSPHORUS.

The daily average excretion (Series B, I R) of phosphorus in the form of phosphate during the fore period was 0.84 gram; during the low benzoate period, 0. 96 gram; during the high benzoate period, 1.21 grams; during the after period, 1.22 grams. There is here a noticeable increase of phosphorus excretion from the fore period to the low benzoate period and from the low to the high benzoate period. In a rough way the rise in phosphorus output corresponds to the rise in total nitrogen of the urine, already mentioned. The rise from the fore period to the benzoate periods can doubtless be referred to a slightly increased use of protein food.

INDICAN.

In this case there is a moderate rise in the intensity of the indican reactions during the high benzoate period. (Series A, I R.) This rise can perhaps be attributable to a rise in the intake of nitrogen in the food of this period—a rise reflected in the increased elimination of nitrogen of the urine. For, generally speaking, increased protein intake tends to increase protein putrefaction and thus may increase the indican reaction. But such an increased indican reaction does not necessarily follow a moderate increase in nitrogen intake such as occurred in this case in the high benzoate period. It may therefore be connected with the use of the large doses of the sodium benzoate. This point will be further discussed in the section on conclusions.

INDOLACETIC ACID.

Frequent examinations were made for the presence of indolacetic acid. It was found to be present at all times. The reactions were commonly slight, sometimes moderately strong. There was no evidence that the color reactions for indolacetic acid in the urine were in any way influenced by the ingestion of sodium benzoate.

AROMATIC OXYACIDS.

Frequent examinations were made for the presence of aromatic oxyacids. Color reactions were obtainable at all times during the experiment. The reactions were commonly slight, sometimes moderately strong. There was no evidence that the color reactions for the aromatic oxyacids of the urine were in any way influenced by the ingestion of sodium benzoate.

CHLORINE AS SODIUM CHLORIDE.

The average daily excretion of chlorine calculated as sodium chloride (Series B, I R) for the fore period was 8.75 grams; for the low benzoate period, 10.1 grams; for the high benzoate period, 13.7 grams; for the after period, 11.5 grams. These amounts are rather high and correspond to a free use of salt in the dietary. The variations noted can not be regarded as having any significance in the present connection.

REACTION.

The reaction of the urine showed a fair degree of acidity but with slight variations throughout the experiment. There was no evidence that the sodium benzoate had any effect upon the reaction.

THE FECES.

FRESH.

The average daily weight of the fresh feces during the fore period was 135.6 grams (Series B, I R); for the low benzoate period, 134.3

grams; for the high benzoate period, 120.4 grams; for the after period, 87.1 grams. These variations can not be regarded as important. It may be noted that there is an essential correspondence between the weight of the fresh feces, for the fore period and for the low benzoate period.

DRIED.

The weight of the dried feces for the fore period was 31.3 grams, as a daily average; for the low benzoate period, 27 grams; for the high benzoate period, 24.9 grams; for the after period, 22.5 grams.

WATER.

The average percentage of water of the fresh feces for the fore period was 76.9 (Series B, I R); for the low benzoate period, 79.9; for the high benzoate period, 79.1; for the after period, 74.2.

TOTAL NITROGEN.

The average total nitrogen of the dried feces for the fore period amounted to 1.83 per cent (Series F, I R); for the low benzoate period, to 1.57 per cent; for the high benzoate period, to 1.53 per cent; for the after period to 1.34 per cent. These results are well within the limits of normal variation and follow to some extent the variations of the nitrogen intake of the food.

ETHEREAL EXTRACT.

The average daily weights of the ethereal extracts of the dried feces including the fatty acids of the soaps for the various periods were as follows (Series G, I R): For the fore period, 5.9 grams; for the low benzoate period, 5.5 grams; for the high benzoate period, 5.28 grams; for the after period, 5.33 grams.

FAT BALANCE.

The features of the fat intake and output which call for comment are the following (Series G, I R):

(1) The daily average intake of fat.

(2) The percentage of neutral fats, free fatty acids, and fatty acids of soaps in the feces at different periods.

(3) The average percentage of total fats absorbed from the digestive tract (burned or assimilated).

The daily average intake of fat (ethereal extract) in this case was 90 grams for the fore period, 105.8 grams for the low benzoate period, 97.3 grams for the high benzoate period, and 103 grams for the after period. Thus the variations for the different periods were not wide.

The percentage in the feces of neutral fats, free fatty acids, and fatty acids of soaps for the different periods show only moderate

variations, all of which are well within the limits observed in normal persons. There is no indication that the sodium benzoate given in small doses or in large doses caused any alteration in the relative proportions of neutral fats, fatty acids, or soaps in the feces.

The average percentage of total fats absorbed from the intestine is as follows:

	Per cent.
Fore period	93.7
Low benzoate period	94.8
High benzoate period	94.5
After period	94.4

The correspondences in fat absorption in the different periods, as shown by the above figures, are close. Obviously these figures show that the degree of fat absorption has not been influenced either by small or by large doses of sodium benzoate.

GENERAL URINARY EXAMINATION.

ALBUMIN.

At no time in the course of the experiment could albumin be detected in the urine, even in traces. Examinations were made with great frequency and regularity.

SUGAR.

At no time in the course of the experiment could sugar be detected in the urine. Examinations were made with great frequency and regularity.

SEDIMENTS.

Calcium oxalate was frequently observed in the sediments of the urines. Urates were rarely observed. Phosphates were only occasionally noted. Casts were not observed.

Epithelial cells, leucocytes, and crystalline sediments were not noted more frequently during the benzoate periods than during the fore period and the after period.

The urines were well preserved in a cool place, were examined within twenty-four hours after being passed, and were subjected to frequent and regular microscopical examinations.

SPECIAL URINARY EXAMINATION FOR BENZOIC ACID.

During the high benzoate period the urine was subjected to chemical procedures to detect the presence of benzoic acid or benzoates. It was impossible to detect the presence of benzoic acid in the urine. If present at all it must have existed in mere traces. This examination was conducted by Dr. H. D. Dakin.

SPECIAL CHEMICAL EXAMINATION OF THE FECES.

The data relating to the feces, comprised under the above title, pertain to the reaction, the color, the consistence, the mercuric chloride reaction for hydrobilirubin, the *p*-dimethylamido-benzaldehyde reaction for indol and skatol, and the quantitative determination of hydrogen sulphide.

The reaction of the feces was sometimes acid to litmus, sometimes neutral, but generally alkaline. The reaction appears to have been uninfluenced by the taking of sodium benzoate.

The color of the feces was usually brown, sometimes yellow, sometimes olive green. At times, owing to the ingestion of lampblack or charcoal, for purposes of demarcation, the stools were black or dark brown. The color of the feces appears to have been uninfluenced by the taking of sodium benzoate.

The consistence of the feces varied usually between normal limits. Occasionally there was a diarrheal stool. The daily variations in the water content of the feces may be found in the tables relating to Case I R, Series A. The consistence of the feces apparently bears no relation to the ingestion of sodium benzoate.

The *reaction for hydrobilirubin* was slight or negative during the fore period, frequently strong during the benzoate and after periods. This reaction varies so widely in health that it is difficult to attach significance to it unless it is either persistently strong or very slight or absent. The persistently slight reactions noted in the fore period, are somewhat unusual in persons in health, and this physiological variation is perhaps less common and therefore more noteworthy than the very strong reactions several times noted during the high benzoate period. It is not possible to state whether the very strong reactions noted during the high benzoate period were accidental or in some way connected with the benzoate dosage. It should be observed that the reactions noted during the low benzoate period all came within the limits observed under natural and healthful physiological conditions.

The *reaction for indol* was usually slight or moderate, seldom strong. The reactions for each period, considered separately, fall well within the normal limits. Indeed it may safely be stated that these color reactions indicate, for each period of the experiment, a rather unusually low intensity of indolic intestinal putrefaction. Possibly the reactions were on the whole somewhat stronger during the benzoate periods than during the fore period, but these differences are too slight to mark a definite tendency. Hence they call for no further comment here.

HYDROGEN SULPHIDE.

Quantitative determinations were made of the hydrogen sulphide content of the feces from September 5 to the end of the experiment (Series I, I R). These observations were made with the thought that an abnormal grade of putrefaction might possibly be revealed by a rise in the hydrogen sulphide of the feces, as in some instances of intestinal disease. The figures obtained in the present instance fall well within the limits of the normal. In fact they indicate very moderate or small values of hydrogen sulphide, both in the high benzoate period and in the after period. We are thus justified in concluding that the fixation of the hydrogen sulphide in the feces in this subject was not influenced by the taking of large doses of sodium benzoate.

NOTE.—In addition to this chemical examination, the feces were subjected to microscopic study to determine whether there were any alterations in their character indicating a diminished absorption of foodstuffs (e. g., meat fiber, fats, etc.) during the benzoate periods. No changes of this character were detectable. Moreover no increase in mucus was observable and no increase in cellular elements (including leucocytes) derived from the intestinal wall.

BACTERIOLOGICAL EXAMINATION OF THE FECES.

The bacteriological examination of the feces consisted of the study of the microscopical preparations of Gram-stained smears made from the feces (usually within one or two hours of their passage), of the study of the gas production in dextrose-bouillon fermentation tubes, and the study of the Gram-stained sediments obtained from these fermentation tubes. Elaborate cultural studies of the fecal bacteria were not undertaken because it was believed that the results obtainable from them would not be commensurate in value with the labor and expense involved.

GRAM-STAINED FECAL SMEARS.

The Gram-stained fecal smears were made daily throughout the experiment. These smears were studied with a view to noting any striking differences in the morphology and staining properties of the fecal bacteria in the course of the experiment. Experience has shown that marked variations in the flora may be detectable by the examination of the Gram-stained feces. Slight variations can not, of course, be determined in this way, but it was believed that this method afforded a reasonable chance of detecting significant variations in the flora, should they arise in consequence of the use of sodium benzoate.

In Case I R the slides show moderate variations from day to day in the morphology of the bacteria and their failure or ability to take

the Gram-stain. These variations are of the same nature as those observed in all normal individuals, even when approximately the same diet is maintained (as in the present experiment). Neither the preparations belonging to the period of small dosage nor that of high dosage reveal any significant or persistent variations. The preparations of bacteria which we are justified in roughly and provisionally grouping under the *B. coli* and *B. lactis aerogenes* types, the coccal type, the acidophile and *B. infantilis* types, and the *B. aerogenes capsulatus* types varied throughout the extent of the observations within limits observable in health.

GAS PRODUCTION IN DEXTROSE-BOUILLON FERMENTATION TUBES.

Observations were made twice weekly on the gas production of the mixed fecal flora in dextrose-bouillon fermentation tubes in the hope of detecting any influence that might possibly be exerted by sodium benzoate on the gas forming function of the intestinal bacteria. Fluctuations in the quantity of gas formed in the dextrose-bouillon tubes by the mixed flora from the same individual are, of course, to be expected under physiological conditions. But the changes in gas volume referable to the bacteria inoculated from day to day are not considerable so long as the diet remains unchanged in its general characters, especially as regards the proportions of carbohydrates and proteins ingested. When the diet is markedly altered with respect to proteins or carbohydrates there occurs an alteration in gas productivity on the part of the bacteria. A diet rich in protein and low in carbohydrates tends to increase the gas productivity of the fecal bacteria. A diet rich in carbohydrates and low in proteins tends to diminish the gas productivity of the fecal flora—a result exactly contrary to that which would be expected from the well-known observation that carbohydrates in abundance are apt to occasion flatulence. The reasons for this apparent paradox need not be discussed here. The important thing in this connection is that the diet of all the subjects of the experiment was fairly uniform, as may be observed from the dietary tables. Hence any considerable variations in gas production by the fecal bacteria would not be fairly attributable to variations in diet but would depend on some other cause.

The curve based on the variations of gas production by the fecal bacteria in Case I R is shown in Series K, I R. It is noteworthy that in general gas productivity is considerably lower, on the average, during the benzoate periods, than before the administration of benzoate. It should also be noted that there is a definite rise in gas production following immediately on the cessation of the high doses of sodium benzoate. The smallest gas production corresponds roughly to the largest doses of sodium benzoate.

It may be mentioned in this connection that there was a somewhat increased use of proteins during the high benzoate period as compared with the low benzoate and the fore periods, but this would tend to increase the gas production. On the whole it seems probable that the depression in gas formation observed was an effect of the use of sodium benzoate.

THE GRAM-STAINED FERMENTATION TUBE SEDIMENTS.

Examination of the Gram-stained sediments from the fermentation tubes indicates the presence of varieties of bacteria normally found. In general it may be said that the coccal types of bacteria, Gram-negative and Gram-positive staphylococcal forms, and sometimes diplo-streptococcal forms are more numerous in the fermentation tube sediments during the period of low gas production than during the remaining periods. It is not possible to detect in the Gram-stained smears made from the fresh feces any corresponding increase of coccal forms.

CALORIC VALUES OF THE FOODSTUFFS.

The caloric values of the food consumed by the various subjects were computed in the following manner: From the representative samples of the food used the weight of the dried food, less the ash, was obtained. It was assumed that this food consisted of fats, proteins, and carbohydrates available for nutritive purposes. The small quantity of cellulose contained in the food does not disturb the validity of this assumption in relation to the present object. The fat of the food was calculated from the ethereal extract, the protein was calculated from the nitrogen, and the material left after deducting the fat and the nitrogen was assumed to consist of carbohydrate matter. (For further detail see under Methods; Caloric value of foods.)

In Case I R the daily average for the caloric values of the food ingested was as follows[a] (Series H, I R):

	Calories.
For the fore period	2, 320
For the low benzoate period	2, 252
For the high benzoate period	2, 176
For the after period	2, 311

From this it is seen that the caloric values were adequate but not excessive for a man of moderate weight following an indoor occupation calling for a moderate expenditure of muscular energy.

[a] Through inadvertence a record was not kept of the amount of sugar consumed with the food after August 13. The latter values in the table, especially the last two, are somewhat lower than the actual values on this account.

SPECIAL CLINICAL DATA.

For the study of the clinical conditions in our group of cases the referee board secured the services of Dr. John S. Thacher. Doctor Thacher and his associates took charge of the medical aspects of the investigation. They also made the examinations of the blood by clinical methods, and a careful study of the gastric contents with especial reference to the free hydrochloric acid present. The specimens of blood and of gastric contents were taken for examination one hour after an Ewald test breakfast.

The results of these investigations are given in four charts in Series L. Chart No. I gives in detail all of the findings. Chart No. II gives the averages of the several determinations from specimens taken at the same time.[a] Chart No. III gives these same averages shown by curves. Chart No. IV gives the average figures and the composite curves obtained by averaging the results obtained from the four individuals who were the subjects of these investigations.

All of the findings except the weight and the general conditions were obtained in duplicate or multiple observations. The initial letter of the observer will be found recorded in each instance. The letters in the column at the left (Chart I) refer to the observer making determinations of hemoglobin and the collection of the specimens, the rest of the determinations being made by the observer whose initial is placed in the column at the right. All the pipettes used in the blood work were numbered, and these numbers are inserted in the first chart, so that it can be seen whether the same or different pipettes were used for different observations. The same two Fleischl hemoglobinometers were used throughout. The counting chambers used varied with the observers. One observer, "C," made one of the determinations in each examination throughout the series. The other observer, acting as a check upon the first, was changed at times. The two observers in each instance worked entirely independently.

The reader may be referred especially to Chart No. III, Series L, giving the curves showing the relative weights of the subject, the hemoglobin percentage, and the red and white cells from data derived from Chart No. II.

There are certain data relating to the clinical condition of the subjects of the benzoate experiment which are of sufficient importance, as indications of the physiological state or "state of health," to deserve special comment here. These data relate to (1) the weight of the subjects, (2) the morphological elements of the blood and the hemoglobin, (3) the hydrochloric acid of the gastric juice.

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[a] A few results relating to the leucocyte count widely at variance with the other observations on account of the development of yeast cells in one of the solutions were omitted in making the averages.

WEIGHT.

The weights relating to Subject I R are graphically shown in Series J, I R. The noteworthy feature in this case is the gradual rise in weight notwithstanding the ingestion of sodium benzoate. Even during the high benzoate period there is observed an increase in the body weight. (See also Series A, I R.)

EXAMINATION OF THE BLOOD.

HEMOGLOBIN.

The hemoglobin curve (Series L, Chart III, I R) shows uniformity throughout, with a slight tendency to rise toward the end of the experiment. There is no indication of any effect from the taking of benzoate.

RED BLOOD CELLS.

The curve indicative of the red blood cell count shows a normal uniformity for the different periods. The slight rise during the low benzoate period does not call for discussion. No effect from the benzoate is discernible in this curve. (Series L, Chart III.)

WHITE BLOOD CELLS.

The curve showing the numbers of the white blood cells shows a rise in the middle of the high benzoate period, which is not sustained. There is no reason to attribute this rise to the influence of the ingested benzoate. (Series L, Chart III.)

The *differential leucocyte count* shows only variations within normal limits. (Series L, Charts I and II.)

FREE HYDROCHLORIC ACID.

The curve for the free hydrochloric acid of the gastric juice is of interest, as it starts from zero and gradually rises to normal values, which are attained in the high benzoate period. (Series L, Chart III.)

SUMMARY OF CONCLUSIONS RELATIVE TO CASE I R.

In stating the conclusions derivable from this investigation relative to the action of sodium benzoate on the human body it is necessary to distinguish between the effects of small doses (under 0.5 gram daily) and the effects of large doses (over 0.5 gram daily).

ACTION OF SMALL DOSES OF SODIUM BENZOATE.

It may be stated that no action from small doses of sodium benzoate was detectable by the methods employed in this investigation in respect to the following features:

(1) The general health of the subject, as indicated by the subjective and objective signs.

(2) The composition of the urine (with one exception, viz, the physiological effect on the hippuric acid excretion).
(3) The composition of the feces.
(4) The absorption of fats and the fat balance.
(5) The character of the bacteria of the intestinal tract.
(6) The weight of the body.
(7) The hemoglobin of the blood.
(8) The red blood cells.
(9) The white blood cells.

The observed rise in hippuric acid of the urine was such as to be expected from the well-known metabolism of benzoic acid in the animal organism.

ACTION OF LARGE DOSES OF SODIUM BENZOATE.

It may be stated that no definite physiological consequences of large doses of sodium benzoate were detectable by the methods employed in this investigation, except in the following respects:

(1) There was a considerable or large rise in the hippuric acid excretion, such as would be expected from the doses of sodium benzoate ingested.

(2) There was a slight increase of the indican of the urine, which was possibly attributable to an action of the sodium benzoate—perhaps a slight irritant action in the gastro-enteric tract, so altering the secretions and bacteria as to favor intestinal putrefaction.

(3) There was a depression of the gas-producing function of the mixed fecal bacteria in dextrose bouillon.

(4) There was a moderate but apparently unmistakable rise in the proportion of coccal bacteria observed in the fermentation tube sediments derived from the inoculation of the mixed fecal flora.

(5) There was a distinct rise in the free hydrochloric acid of the gastric juice.

CASE II H.

GENERAL MEDICAL NOTES.

The subject of this experiment was a medical student, 21 years of age, healthy, and of good habits of life. He was uncommonly well nourished, with some tendency to obesity. Twice during the course of the experiment he had slight disorders of digestion. Once there was irregularity of the bowels with some diarrhea (July 14–17) and on another occasion (August 21) colic and slight diarrhea. Investigation of these disturbances failed to connect them with the use of sodium benzoate, but made it probable that they were referable to some other influence. On September 20 the subject contracted a slight cold. With these unimportant exceptions he remained in

good health throughout the course of the experiment. It should be noted that while in general a regular life was led during the experiment, there was considerable railroad travel in and out of the city. In this respect and also in respect to uniformity in food the subject of this experiment was less regular in his habits than the other members of the experimental group. It should further be observed that there was no disorder of digestion in this case during the high benzoate period. This is of interest in connection with the interpretation of the slight disorders of digestion that occurred during the low benzoate period, for if the latter were referable to the use of the benzoate it is reasonable to expect that they would recur when much larger doses of benzoate were taken. This, however, was not the case.

The daily dose of sodium benzoate was 0.45 gram for the low period; for the high benzoate period it ranged from 0.6 gram to 6 grams per day.

ANALYTICAL DATA RELATING TO THE URINE AND THE FECES.

THE URINE.

VOLUME.

The daily volume of the urine (Series A, II H) varied between 620 c. c. and 2,180 c. c. The fluctuations can be brought into no relation with the use of sodium benzoate, for during the very warm weather corresponding to a large part of the experimental period the intake of water could not accurately be measured nor could the perspiration be estimated in its volume.

SPECIFIC GRAVITY.

The specific gravity (Series A, II H) varied between 1.036 and 1.018, and no significance can be attached to these variations in connection with the present investigation.

TOTAL NITROGEN.

During the fore period of fourteen days the average daily total nitrogen of the urine amounted to 13.88 grams (Series B, II H); for the low benzoate period, to 13.78 grams; for the high benzoate period, 16.04 grams; for the after period, 15.86 grams. It may be noted that the average daily nitrogen excretion for the fore period and for the low benzoate period corresponded closely.

NITROGEN BALANCE.

The data relating to the nitrogen balance in this case are given in a special table (Series F, II H). They show for the fore period an average daily positive balance (i. e., a greater nitrogen intake than output) of 0.18 gram; for the low benzoate period a positive balance

of 1.59 grams; for the high benzoate period a negative balance of 0.6 gram; for the after period a positive balance of 1.26 grams. The daily intake of nitrogen with the food varied within small limits for the first three periods as follows:

	Grams.
Fore period	15.5
Low benzoate period	16.8
High benzoate period	16.74
After period	18.74

There can be little doubt that the loss of nitrogen by the perspiration in this case was an element disturbing to the nitrogen balance, for the perspiration was profuse. The extent of the loss of nitrogen by the perspiration is indicated by experimental work which bears on this question.[a]

In our other subjects the perspiration was probably also a factor in determining the nitrogen excretion, but in this instance it is fair to assume that it was of special importance.

NITROGEN OF UREA.

The nitrogen of urea may best be considered from the standpoint of the percentage of the total nitrogen which it represents. The average percentage of nitrogen of urea for the fore period was 80.7 per cent of the total nitrogen (Series D, II H); for the low benzoate period, 80.7 per cent; for the high benzoate period, 80.8 per cent; for the after period, 81.6 per cent. Here we have an example of close uniformity in the nitrogen of urea for the various periods of the observation, a uniformity undisturbed by the high benzoate dosage. As these percentages fall wholly within the physiological limits, their further discussion in the present connection would have no significance.

NITROGEN OF AMMONIA.

If we look at the table for nitrogen of ammonia in this case (Series B, II H) we see that the actual excretion of nitrogen of ammonia for the fore period was 0.82 gram; for the low benzoate period, 0.76 gram; for the high benzoate period, 0.88 gram; for the after period, 0.86 gram. The average percentages of nitrogen of ammonia are as follows (Series D, II H): For the fore period, 5.9 per cent of the total nitrogen; for the low benzoate period, 5.5 per cent; for the high benzoate period, 5.5 per cent; for the after period, 5.4 per cent. There exists here a close uniformity for the various periods, both in the actual nitrogen of ammonia and in the percentages of the total nitrogen, which fall well within the limits of the normal. It is quite plain, therefore, that the use of sodium benzoate has exercised no disturbing influence on the nitrogen of ammonia.

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[a] See Atwater and Benedict, Bulletin 136, Office of Experiment Station, U. S. Department of Agriculture, 1903, p. 118.

TOTAL PURIN NITROGEN.

The average daily output of purin nitrogen for the fore period (Series B, II H) was 0.32 gram; for the low benzoate period, 0.31 gram; for the high benzoate period, 0.34 gram; for the after period, 0.33 gram. The uniformity shown by these figures is reflected also in the percentages (Series D, II H) which show, for the fore period, an average of 2.3 per cent of the total nitrogen; for the low benzoate period, 2.3 per cent; for the high benzoate period, 2.1 per cent; for the after period, 2.1 per cent. It is unneccessary to comment on these entirely normal findings.

NITROGEN OF URIC ACID.

The average daily excretion of uric acid nitrogen for the fore period (Series B, II H) was 0.29 gram; for the low benzoate period, 0.27 gram; for the high benzoate period, 0.29 gram; for the after period, 0.28 gram. This close uniformity for the various periods is reflected in the averages of percentages (Series D, II H), which are as follows: For the fore period, 2.1 per cent of the total nitrogen; for the low benzoate period, 2 per cent; for the high benzoate period, 1.8 per cent; for the after period, 1.8 per cent. It is safe to conclude from these entirely normal values that the administration of sodium benzoate was without appreciable influence on the excretion of uric acid.

NITROGEN OF CREATININ.

The average daily output of nitrogen of creatinin for the fore period (Series B, II H) was 0.59 gram; for the low benzoate period, 0.67 gram; for the high benzoate period, 0.80 gram; for the after period, 0.79 gram. There is here an evident rise in the creatinin from the fore period to the two benzoate periods, this rise being maintained during the after period. It is possible that a portion of the rise may be referable to the use of sodium benzoate, it being noteworthy that the highest creatinin output corresponds to the high benzoate period. On the other hand, the rise in creatinin may be due to the moderate increase in the nitrogen intake during the high benzoate period. This appears the more probable view.

Looking at the nitrogen of creatinin from the standpoint of percentages (Series D, II H) we see only slight increase from one period to another. During the fore period the average percentage was 4.3 per cent of the total nitrogen; during the low benzoate period, 4.9 per cent; during the high benzoate period, 5 per cent; and during the after period, 5 per cent. We may, therefore, say that the rise in creatinin during the benzoate periods is noticeable also in these percentages though the change is less marked than when considered from the standpoint of actual creatinin excretion.

NITROGEN OF HIPPURIC ACID.

The nitrogen of hippuric acid, as would be expected, rises during the benzoate periods. The table (Series E, II H) clearly shows the influence of benzoic acid intake upon the hippuric acid output for the various periods. It is seen from this table that the daily average of benzoic acid calculated from the nitrogen of the hippuric acid eliminated in the urine was 0.6701 gram for the fore period; for the low benzoate period it had risen to 1.0120 grams; if we deduct from this amount, representing the daily average for the low benzoate period, the amount representing the daily average for the fore period, we get 0.3419 gram as the average daily amount of benzoic acid excreted referable to the intake of sodium benzoate during the low benzoate period. Again referring to the table, we see that the daily average amount of benzoic acid ingested during the low benzoate period was 0.3813 gram. In other words, there is here a close and satisfactory correspondence between the rise in hippuric acid output due to sodium benzoate and the actual amount of sodium benzoate ingested.

For the high benzoate period we see that the average daily amount of benzoic acid ingested was 1.5730 grams, whereas the calculated amount excreted referable to the administration of sodium benzoate amounted to 1.5689 grams. Here again we see a close and satisfactory correspondence between the actual amount of benzoate taken and the amount of hippuric acid excreted and referable to this intake.

For the after period the daily average excretion of benzoic acid amounted to 0.0546 gram.

UNDETERMINED NITROGEN.

In regard to the undetermined nitrogen we find the daily average for the fore period amounted to 0.87 gram (Series B, II H); for the low benzoate period, 0.78 gram; for the high benzoate period, 0.75 gram; for the after period, 0.85 gram. The slightness of these variations for the different periods is reflected also in the percentages of total nitrogen (Series D, II H), the average percentage for the fore period being 6.2 per cent; for the low benzoate period, 5.7 per cent; for the high benzoate period, 4.7 per cent; for the after period, 5.4 per cent. No further comment need be made on these results, as they are obviously indicative of entirely physiological conditions which are in no wise disturbed through the use of sodium benzoate.

TOTAL SULPHUR.

The daily average of the total output of sulphur for the fore period was 1.003 grams (Series B, II H); for the low benzoate period,

1.032 grams; for the high benzoate period, 1.173 grams; for the after period, 1.112 grams. There is thus a moderate rise in the total sulphur output from the fore period to the low benzoate period, and a still further rise from the low to the high benzoate period. During the after period there is a distinct falling off. While the total amount of sulphur in the urine in health varies in general with the total nitrogen, the correspondence is not absolute and our figures fall well within the limits of normal variation.

INORGANIC SULPHUR.

In regard to the inorganic sulphur, we see that for the fore period the daily average output is 0.804 gram (Series B, II H); for the low benzoate period, 0.807 gram; for the high benzoate period, 0.945 gram; for the after period, 0.902 gram. The rise in inorganic sulphur from the low to the high benzoate period is distinct, as in the case of the similar rise in the total sulphur, and what has been said in relation to the latter applies also to the former. An examination of the table showing percentages (Series D, II H) indicates that the inorganic sulphur was not disturbed by the use of sodium benzoate, for during the fore period the average percentage of the inorganic sulphur was 80 per cent of the total sulphur; during the low benzoate period, 78.2 per cent; during the high benzoate period, 80.5 per cent; and during the after period 81 per cent.

ETHEREAL SULPHUR.

The average daily excretion of ethereal sulphur for the fore period was 0.052 gram (Series B, II H); for the low benzoate period, 0.058 gram; for the high benzoate period, 0.063 gram; and for the after period, 0.052 gram. The rise from the fore period to the benzoate periods is so small that it can not be regarded as possessing any significance. Nevertheless the fall in the after period to precisely the same average level as that during the fore period is an indication that the ethereal sulphates were slightly increased during each of the benzoate periods, presumably through the slight increase in the intestinal putrefaction. The percentages (Series D, II H) relating to the ethereal sulphur simply confirm the remarks just made on the basis of the actual output of ethereal sulphur. The slight rise in ethereal sulphur during the benzoate periods is reflected also in the ratio existing between inorganic and ethereal sulphur. These changes are no greater than the fluctuations noted in health and are well within normal limits. There is no reason to ascribe them to the use of sodium benzoate.

NEUTRAL SULPHUR.

The average daily output of neutral sulphur for the fore period was 0.147 gram (Series B, II H); for the low benzoate period, 0.167 gram;

for the high benzoate period, 0.165 gram; for the after period, 0.158 gram. These figures point to a very slight rise in the neutral sulphur during the benzoate period—a rise, however, well within the limits of the normal and probably devoid of physiological significance. The average percentages of the neutral sulphur for the fore, low benzoate, high benzoate, and after periods, are 14.9 per cent, 16.2 per cent, 14.1 per cent, and 14.3 per cent of the total sulphur (Series D, II H).

PHOSPHATE PHOSPHORUS.

The table giving the average daily excretion of phosphorus in the form of phosphates shows an average value of 1.12 grams daily for the fore period (Series B, II H); 1.16 grams for the low benzoate period; 1.35 grams for the high benzoate period; and 1.26 grams for the after period. These slight variations in the phosphorus output for the different periods are well within the physiological limits.

INDICAN.

There was in this case a moderate but distinct rise in the intensity of the indican reactions during the high benzoate period (Series A, II H). There is no reason to regard the rise in indican as possibly dependent on an increased intake of protein during this period, as the protein intake (see Series F, II H) was nearly uniform with the period preceding the high benzoate. Nor is there any reason to think that the increase of indican was dependent on any alteration in the quality of the protein ingested, as the diet tables do not support any such view. The possibility that the indican was increased as the result of using considerable doses of sodium benzoate must be admitted.

INDOLACETIC ACID.

Frequent examinations were made for the presence of indolacetic acid. It was found to be present at all times. The reactions were commonly strong but hardly pathological. There was no evidence that the color reactions for indolacetic acid in the urine were in any way influenced by the ingestion of sodium benzoate.

AROMATIC OXYACIDS.

Frequent examinations were made for the presence of aromatic oxyacids. Strong color reactions were obtainable at nearly all times during the experiment, but these reactions were hardly of pathological intensity. There was no evidence that the color reactions for aromatic oxyacids of the urine were in any way influenced by the ingestion of sodium benzoate.

CHLORINE AS SODIUM CHLORIDE.

During the fore period the average daily excretion of chlorine (calculated as sodium chloride) was 10.2 grams (Series B, II H); during the low benzoate period, 12.7 grams; during the high benzoate period, 13.6 grams; and during the after period, 12.2 grams. The rise from the fore period to the low benzoate, the high benzoate, and the after periods, is clearly referable to increased appetite and has its explanation in a slight change in the food ingested during these periods.

THE FECES.

FRESH.

The average daily weight of the fresh feces for the fore period was 124.1 grams (Series B, II H); for the low benzoate period, 131.6 grams; for the high benzoate period, 121.1 grams; and for the after period, 116.7 grams. These variations are too small to be in any way significant, and need not be further discussed.

DRIED.

The average daily weight of the dried feces for the fore period was 23.6 grams; for the low benzoate period, 27.2 grams; for the high benzoate period, 28 grams; and for the after period, 25.3 grams. The slight rise in the weight of the dry feces which is observable in the benzoate periods and the after period is due to the slight increase in food which has been already mentioned.

WATER.

The average percentage of water of the fresh feces for the fore period was 81; for the low benzoate period, 79.3; for the high benzoate period, 76.9; and for the after period, 78.3. The variations in the water content of the feces are unimportant and require no comment.

TOTAL NITROGEN.

The average total nitrogen of the dried feces for the fore period amounted to 1.29 per cent (Series F, II H); for the low benzoate period, to 1.41 per cent; for the high benzoate period, to 1.51 per cent; for the after period, to 1.56 per cent. These results vary with the intake of nitrogen of the food and are within the limits of normal variation.

ETHEREAL EXTRACT.

The average daily weights of the ethereal extracts of the dried feces, including the fatty acids of the soaps, for the various periods are as follows (Series G, II H): For the fore period, 3.84 grams; for the low benzoate period, 5.50 grams; for the high benzoate period, 6.27 grams; for the after period, 6.67 grams.

FAT BALANCE.

The features of the fat intake and output which call for comment are the same as those mentioned under Case I R, viz:

THE DAILY AVERAGE INTAKE OF FAT.

It is noteworthy in this case that the total daily intake of fat was considerably less in the fore period than in any of the subsequent periods (Series G, II H). During the fore period the average daily intake was 100.5 grams; during the low benzoate period, 142.2 grams; during the high benzoate period, 131.4 grams; and during the after period, 151.1 grams.

THE PERCENTAGES OF NEUTRAL FATS, FREE FATTY ACIDS, AND FATTY ACIDS OF SOAPS IN THE FECES AT DIFFERENT PERIODS.

If we compare the percentages of neutral fats, free fatty acids, and fatty acids of soaps in the feces for the different experimental periods, we see that they show only moderate variations, all of which are well within the limits observed in normal persons. The variations observed are too small and too irregular to suggest that they are related to the use of sodium benzoate.

THE AVERAGE PERCENTAGE OF TOTAL FATS ABSORBED FROM THE DIGESTIVE TRACT (BURNED OR ASSIMILATED).

The average percentages of total fats absorbed from the digestive tract for the various periods were as follows: (Series G, II H.)

	Per cent.
Fore period	96. 7
Low benzoate period	96. 1
High benzoate period	95. 6
After period	95. 6

The correspondence in fat absorption for the different periods is so close as to exclude the possibility of deducing from these figures any disturbing influences of the benzoate taken upon the fat absorption either during the low period or the high period.

GENERAL URINARY EXAMINATION.

ALBUMIN.

At no time in the course of the experiment could albumin be detected in the urine, even in traces. Examinations were made with great frequency and regularity.

SUGAR.

At no time in the course of the experiment could sugar be detected in the urine. Examinations were made with great frequency and regularity.

SEDIMENTS.

Calcium oxalate and epithelial cells were frequently noted in the urinary sediments. Urates were rarely observed. Phosphates were frequently seen. Casts were not seen.

Epithelial cells, leucocytes, and crystalline sediments were not noted more frequently during the benzoate periods than during the fore and after periods.

The urines were well preserved in a cool place, were examined within twenty-four hours after being passed, and were subjected to frequent and regular microscopical examinations.

SPECIAL URINARY EXAMINATION FOR BENZOIC ACID.

During the high benzoate period the urine was subjected to chemical procedures designed to detect the presence of benzoic acid or benzoates. It was impossible to detect the presence of benzoic acid in the urine.

SPECIAL CHEMICAL EXAMINATION OF THE FECES.

The data relating to the feces, comprised under the above title pertain to the reaction, the color, the consistence, the mercuric chloride reaction for hydrobilirubin, the *p*-dimethylamido-benzaldehyde reaction for indol and skatol, and the quantitative determination of hydrogen sulphide.

The reaction of the feces was sometimes acid to litmus, sometimes neutral, but generally alkaline. The reaction does not appear to have been influenced by the ingestion of sodium benzoate.

The color of the feces was usually brown, sometimes greenish or grayish. At times, owing to the ingestion of lampblack or charcoal, for purposes of demarcation, the stools were black or very dark. The color of the feces appears to have been uninfluenced by the taking of sodium benzoate.

The consistence of the feces varied usually within normal limits. There were a few diarrheal stools. The daily variations in the water content of the feces may be found in the tables relating to Case II H, Series A. The taking of sodium benzoate apparently stands in no causal relation to the consistence of the feces.

The *reaction for hydrobilirubin* was usually slight and only occasionally strong. The different periods of the experiment show no distinct differences in the intensity of this reaction. There is no indication that this reaction has been in this case influenced either by the benzoate of the low period or by the benzoate of the high period.

The *reaction for indol* was usually slight or moderate, occasionally strong. The reactions appear to have been of about the same

average grade of intensity in all the periods, yet the record of strong reactions is somewhat more frequent for the high benzoate period than for the other periods. It must be admitted that there is a possibility that these relatively strong reactions have been in some way occasioned by the large doses of sodium benzoate. While these reactions are not of such intensity as to indicate a pathological degree of putrefaction, they may possibly be indicative of a tendency to physiological variations in an undesirable direction.

HYDROGEN SULPHIDE.

Quantitative determinations were made of the hydrogen sulphide content of the feces from September 5 to the end of the experiment (Series I, II H). The figures obtained in the present instance fall well within the limits of the normal. They indicate only small percentages of hydrogen sulphide, both in the high benzoate period and in the after period. We are thus justified in concluding that the fixation of hydrogen sulphide in the feces in this subject was not influenced by the use of large doses of sodium benzoate.

NOTE.—In addition to this chemical examination, the feces were subjected to microscopic study, to determine whether there were any alterations in their character indicating a diminished absorption of foodstuffs (e. g., meat fiber, fats, etc.) during the benzoate periods. No changes of this character were detectable. Moreover, no increase in mucus was observable and no increase in cellular elements (including leucocytes) derived from the intestinal wall.

BACTERIOLOGICAL EXAMINATION OF THE FECES.

The bacteriological study of the feces, by the methods employed in that investigation (see corresponding section of Case I R), yielded the following results:

(1) The feces in the benzoate periods showed no determinable changes in bacterial flora as compared with the fore period and the after period, especially no definite change in respect to organisms of the *B. coli* and *B. lactis aerogenes* types, or in respect to bacteria of the *B. aerogenes capsulatus* types. A definite increase in coccal types was not determinable in Gram-stained fields and plating methods were not employed in their connection.

(2) During the high benzoate period there was an increase in the numbers of coccal organisms growing in dextrose-bouillon fermentation tubes inoculated with the mixed fecal flora. This increase in coccal forms coincided with the period in which was observed a diminution in the gas production by the mixed fecal flora.

(3) The extent of this diminution in the gas production by the mixed fecal flora is represented in Series K, II H, which shows well the depression in gas formation incidental to the high benzoate period

and also the prompt recovery in gas production after the cessation of the benzoate.

(4) In this case the fermentation tube sediments showed frequently the presence of moderate numbers of organisms of the *B. bifidus* type. They apparently bore no relation to the benzoate intake. The presence of this type of bacteria in moderate numbers is not rare in adults, and is to be regarded as physiological.

CALORIC VALUES OF THE FOODSTUFFS.

In Case II H the daily average for the caloric value of the food ingested was as follows: (Series H).

	Calories.
For the fore period	2,470
For the low benzoate period	3,311
For the high benzoate period	3,244
For the after period	3,274

The calories for the fore period are rather low for a man of considerably more than average weight, but the caloric values of the food for the remaining periods are adequate for such a person leading an indoor life, with only moderate muscular exertion.

SPECIAL CLINICAL DATA.

WEIGHT.

The variations in weight in Case II H are readily seen from the inspection of the chart (Series J, II H) where they are graphically represented. The fall in weight during the middle of July and again during the end of August is probably to be connected with the digestive disorders already mentioned. What should be especially noted is the fact that the weight of the subject rose during the high benzoate period. Taking the experimental period as a whole, it shows a distinct rise in the weight of the subject. (See also Series A, II H.)

EXAMINATION OF THE BLOOD.

HEMOGLOBIN.

The hemoglobin curve (Series L, Chart III) in this case shows some irregularities, but on the whole a tendency to a rise in the hemoglobin percentage. An injurious influence from the ingestion of benzoate can not be detected.

RED BLOOD CELLS.

The red blood cell counts show no important alterations in the various periods. The curve shows that the normal counts of the fore period are maintained throughout the experiment. No influence from the benzoate is discernible in this curve. (Series L, Chart III.)

WHITE BLOOD CELLS.

The white blood cells show considerable fluctuations in numbers, but the variations shown by the curve fall within physiological limits. Comparing this curve with the curves from the other subjects we find no sign of any characteristic referable to the action of benzoate. (Series L, Chart III.)

The *differential leucocyte count* shows only variations within physiological limits. (Series L, Charts I and II.)

FREE HYDROCHLORIC ACID.

The curve showing the course of the gastric secretion of free hydrochloric acid reveals a slight rise during the low benzoate period and a considerable rise during the high benzoate period. Comparison with similar curves from the remaining subjects indicates that this rise of hydrochloric acid in the high benzoate period was a characteristic occurrence. (Series L, Chart III.)

SUMMARY OF CONCLUSIONS RELATIVE TO CASE II H.

In stating the conclusions derivable from this investigation relative to the action of sodium benzoate on the human body, it is necessary to distinguish between the effects of small doses (under 0.5 gram daily) and the effects of large doses (over 0.5 gram daily).

ACTION OF SMALL DOSES OF SODIUM BENZOATE.

It may be stated that no action from small doses of sodium benzoate was detectable by the methods employed in this investigation in respect to the following features:

(1) The general health of the subject, as indicated by the subjective and objective signs.
(2) The composition of the urine (with one exception, viz, the physiological effect on the hippuric acid excretion).
(3) The composition of the feces.
(4) The absorption of fats and the fat balance.
(5) The character of the bacteria of the intestinal tract.
(6) The weight of the body.
(7) The hemoglobin of the blood.
(8) The red blood cells.
(9) The white blood cells.

The observed rise in hippuric acid of the urine was such as to be expected from the well-known metabolism of benzoic acid in the animal organism.

ACTION OF LARGE DOSES OF SODIUM BENZOATE.

It may be stated that no definite physiological consequences of large doses of sodium benzoate were detectable by the methods employed in this investigation, except in the following respects:

(1) There was a considerable or large rise in the hippuric acid excretion, such as would be expected from the doses of sodium benzoate ingested.

(2) There was an increase of the indican of the urine, not great but unmistakable. This rise is possibly attributable to an action of the sodium benzoate—perhaps a slight irritant action in the gastro-enteric tract, so altering the secretions and bacteria as to favor intestinal putrefaction. The behavior of the ethereal sulphates indicates that the rise in intestinal putrefaction is slight.

(3) There was a depression of the gas-producing function of the mixed fecal bacteria in dextrose bouillon.

(4) There was a moderate but apparently unmistakable rise in the proportion of coccal bacteria observed in the fermentation tube sediments derived from the inoculation of the mixed fecal flora.

(5) There was a distinct rise in the free hydrochloric acid of the gastric juice.

CASE III O.

GENERAL MEDICAL NOTES.

The subject of this experiment, a laboratory worker, was 43 years of age, in good health, and of good and regular habits. During previous summers his weight had remained practically uniform, with only occasional slight digestive disorders. He remained in excellent condition throughout the course of the experiment, despite the fact that he was obliged to lead an unusually active and tiring life. There were no digestive or nervous disorders at any time. There was, on the contrary, some improvement in general condition toward the end of the experiment, at the time of the high benzoate period.

This case differs from cases I R and IV L in that the dosage of sodium benzoate during the low benzoate period is higher than in either of these cases, the amount of sodium benzoate taken during the low benzoate period being 0.45 gram throughout the greater part of the period, resembling in this regard Case II H. Moreover, in this case the low benzoate period, lasting fifty-three days, was immediately preceded by a period of seven days during which the subject took daily 0.6 gram of sodium benzoate. It has arbitrarily been agreed in these experiments to regard dosages under 0.5 gram as small doses, and doses of over 0.5 gram as large doses; but since the period during which 0.6 gram daily was given lasted only seven days, there

is no objection to fusing this period with the subsequent period of fifty-three days and considering the results in their entirety for this period.

ANALYTICAL DATA RELATING TO THE URINE AND FECES.

THE URINE.

VOLUME.

The daily volume of the urine (Series A, III O) varied between 915 and 2,530 c. c. For reasons similar to those already mentioned in connection with the urinary volume in the other experimental subjects, it is not possible to attribute significance to the urinary volume in relation to the present investigation.

SPECIFIC GRAVITY.

The specific gravity (Series A, III O) varied between 1.016 and 1.029. The variations have no significance in relation to the present investigation.

TOTAL NITROGEN.

The average daily total nitrogen of the urine during the fore period of thirty days amounted in this subject to 12.89 grams (Series B, III O); for the low benzoate period,[a] to 14.5 grams; for the high benzoate period,[b] to 14.95 grams; for the after period (fourteen days), to 14.28 grams. The variations in the total nitrogen in this case, therefore, are small. The slight rise observed in the benzoate and after periods is explicable by the greater amount of nitrogenous food ingested.

NITROGEN BALANCE.

The data relating to the nitrogen balance in this case are given in table (Series F, III O). They show very narrow variations in the average daily nitrogen balance for the different periods. Thus, for the fore period we see a negative balance (i. e. a lesser nitrogen intake than output) of 0.11 gram; for the low benzoate period a negative balance of 0.26 gram; for the high benzoate period a positive balance of 0.96 gram; for the after period a positive balance of 0.24 gram.

The daily nitrogen intake with the food for the various periods is as follows:

	Grams.
Fore period	14.06
Low benzoate period	15.23
High benzoate period	18.67
After period	16.66

[a] The length of this period, using the term in the sense mentioned above, was sixty days.

[b] The duration of this period was thirty days.

There is no evidence, derivable from data given in this table, that there was any disturbance in nitrogenous metabolism during any of the periods of this experiment.

NITROGEN OF UREA.

If we consider the nitrogen of urea in percentages of the total nitrogen, we find that the average nitrogen of urea for the fore period amounted to 79.7 per cent of the total nitrogen (Series D, III O); for the low benzoate period, to 81.9 per cent; for the high benzoate period, to 82.6 per cent; and for the after period, to 81.5 per cent. These variations are so slight that they call for no comment. They show no indication of any disturbance referable to the use of sodium benzoate.

NITROGEN OF AMMONIA.

The daily average excretion of nitrogen of ammonia for the fore period was 0.90 gram (Series B, III O); for the low benzoate period, 0.90 gram; for the high benzoate period, 0.74 gram, and for the after period, 0.82 gram. These variations are all well within the physiological limits. Looking at the nitrogen of ammonia from the standpoint of percentages (Series D, III O) we find that for the fore period the average nitrogen of ammonia amounted to 7 per cent of the total nitrogen; for the low benzoate period, to 6.2 per cent; for the high benzoate period, 5 per cent; for the after period, 5.7 per cent. The variations here are very small, and of course lie well within the range of fluctuations observed under physiological conditions.

TOTAL PURIN NITROGEN.

In regard to the purin nitrogen (Series B, III O) we find for the fore period a daily average of 0.26 gram; for the low benzoate period, 0.24 gram; for the high benzoate period, 0.26 gram; for the after period, 0.25 gram. The variations are extremely small, and both these variations and the total quantities excreted fall within the limits of the normal. Regarding the purin nitrogen from the standpoint of percentages of the total nitrogen (Series D, III O) we find that for the fore period the average purin nitrogen was 2 per cent of the total nitrogen; for the low benzoate period, 1.7 per cent; for the high benzoate period, 1.7 per cent; for the after period, 1.8 per cent.

NITROGEN OF URIC ACID.

The average daily excretion of nitrogen of uric acid (Series B, III O) during the fore period was 0.19 gram; during the low benzoate period, 0.20 gram; during the high benzoate period, 0.20 gram; during the after period, 0.19 gram. There is here a noteworthy degree of consistency in the uric acid excretion as expressed in the averages for the various periods. A consideration of the uric acid excretion

in terms of percentages (Series D, III O) shows the same noteworthy uniformity, for during the fore period the average uric acid nitrogen was 1.4 per cent of the total nitrogen; during the low benzoate period, 1.3 per cent; during the high benzoate period, 1.4 per cent; during the after period, 1.4 per cent.

NITROGEN OF CREATININ.

The average daily creatinin nitrogen (Series B, III O) output during the fore period amounted to 0.45 gram; during the low benzoate period, to 0.53 gram; during the high benzoate period, to 0.59 gram; during the after period, to 0.59 gram. In terms of percentages (Series D, III O) the average creatinin nitrogen for the different periods is as follows: For the fore period, 3.5 per cent of the total nitrogen; for the low benzoate period, 3.7 per cent; for the high benzoate period, 4 per cent; for the after period, 4.2 per cent. We note, then, a slight rise in creatinin during both benzoate periods, and this rise is maintained during the after period. The slight increase is probably to be attributed to a slight increase in the intake of meat food.

NITROGEN OF HIPPURIC ACID.

The average daily excretion of nitrogen of hippuric acid (Series B, III O) for the fore period was 0.07 gram; for the low benzoate period, 0.15 gram; for the high benzoate period, 0.33 gram; for the after period, 0.10 gram. The rise in hippuric acid is of course dependent on the intake of benzoic acid. The influence of this intake on the hippuric acid output is indicated in a special table (Series E, III O). Reference to this table shows that the benzoic acid calculated from the average daily amount of sodium benzoate ingested amounted to 0.3961 gram. The daily average increase of benzoic acid calculated from the nitrogen of the hippuric acid excreted in the urine for this same period amounted to 0.600 gram. The calculated amount is thus in excess of the actual amount ingested. This increase may be due in part to an actual increase in hippuric acid during the low benzoate period, dependent on an increased consumption of protein food. During the high benzoate period the average moiety of benzoic acid ingested amounted to 1.573 grams daily. The average daily amount calculated from the nitrogen of hippuric acid excreted for the same period, and referable to the ingested sodium benzoate is 1.86 grams. Here also there is a moderate excess in the calculated amount as compared with the quantity ingested, and this can probably be regarded as being due in part to increased intake of protein material.

UNDETERMINED NITROGEN.

The daily average of undetermined nitrogen excreted for the fore period amounted to 0.88 gram (Series B, III O); for the low benzoate period to 0.80 gram; for the high benzoate period to 0.67 gram; for

the after period to 0.87 gram. In this case there was a fall in the undetermined nitrogen during the high benzoate period. As the undetermined nitrogen is obtained by difference, this variation, as already pointed out, possesses no significance in itself.

TOTAL SULPHUR.

The average daily total output of sulphur for the fore period was 0.969 gram (Series B, III O); for the low benzoate period, 1.060 grams; for the high benzoate period, 1.044 grams; for the after period, 1.003 grams. The variations here are too slight to make any comment necessary.

INORGANIC SULPHUR.

The daily average excretion of inorganic sulphur for the fore period amounted to 0.729 gram (Series B, III O); for the low benzoate period to 0.840 gram; for the high benzoate period to 0.825 gram; for the after period to 0.799 gram. If we consider these figures from the standpoint of the percentages (Series D, III O) we find that the average inorganic sulphur is as follows: For the fore period, 77.0 per cent of the total sulphur; for the low benzoate period, 79.3 per cent; for the high benzoate period, 79.1 per cent; for the after period, 79.6 per cent. There is here a noteworthy uniformity and further comment is unnecessary.

ETHEREAL SULPHUR.

The daily averages of ethereal sulphur are as follows: For the fore period, 0.070 gram (Series B, III O); for the low benzoate period, 0.075 gram; for the high benzoate period, 0.073 gram; for the after period, 0.086 gram. The variations in ethereal sulphur are too slight to call for comment.

The ratio between inorganic and ethereal sulphur is for the fore period, 10.6 (Series D, III O); for the low benzoate period, 11.3; for the high benzoate period, 11.6; for the after period, 9.6. Looking at the matter from the standpoint of the ratios we might regard the higher ratios as pointing to a slight fall in putrefaction during the benzoate periods, but the differences are so slight that they must be considered as devoid of significance.

NEUTRAL SULPHUR.

The average daily output of neutral sulphur for the fore period was 0.149 gram (Series B, III O); for the low benzoate period, 0.145 gram; for the high benzoate period, 0.146 gram; for the after period, 0.118 gram. The close correspondence in the output of neutral sulphur for the fore period and the benzoate periods is worthy of note.

PHOSPHATE PHOSPHORUS.

The daily average output of phosphorus in the form of phosphates for the fore period amounted to 0.91 gram (Series B, III O); for the low benzoate period, to 1.05 grams; for the high benzoate period, to 1.04 grams; for the after period, to 1 gram. These variations are well within the normal limits.

INDICAN.

The indican reactions in this case showed a moderate rise in their intensity during the high benzoate period (Series A, III O). As the protein intake for this period was somewhat higher than for any other period, the rise in the indican is possibly attributable to increased intestinal putrefaction due to this cause, but it is possible that the increased intensity of the reactions was in some way dependent on the high dosage with sodium benzoate.

INDOLACETIC ACID.

Frequent examinations were made for the presence of indolacetic acid. It was found to be present at all times. The reactions were commonly strong, but hardly pathological. There was no evidence that the color reactions for indolacetic acid in the urine were in any way influenced by the ingestion of sodium benzoate.

AROMATIC OXYACIDS.

Frequent examinations were made for the presence of aromatic oxyacids. Strong color reactions were obtainable at nearly all times during the experiment, but these reactions were hardly of pathological intensity. There was no evidence that the color reactions for aromatic oxyacids in the urine were in any way influenced by the ingestion of sodium benzoate.

CHLORINE AS SODIUM CHLORIDE.

During the fore period there was a daily average excretion of chlorine (calculated as sodium chloride) amounting to 11.7 grams (Series B, III O); for the low benzoate period, 13.5 grams; for the high benzoate period, 14.6 grams, and for the after period, 12.9 grams. A slight rise is thus observable during the benzoate periods, due to the increased use of salt with the food, and this may be regarded as an indication of somewhat increased appetite and corresponding increase in the food taken.

THE FECES.

FRESH.

The weight of the fresh feces for the fore period showed a daily average of 100.6 grams (Series B, III O); for the low benzoate period. 143.2 grams; for the high benzoate period, 128.4 grams, and for the after period, 125.4 grams.

DRIED.

The dried feces showed an average daily weight of 19.4 grams for the fore period (Series B, III O); 25.6 grams for the low benzoate period; 24.9 grams for the high benzoate period, and 23.1 grams for the after period. A definite rise in the average weight of the dried feces corresponds to the increased intake of food during the benzoate periods and the after period.

WATER.

The average percentage of water of the fresh feces for the fore period was 80.7 (Series B, III O); for the low benzoate period, 82.1; for the high benzoate period, 80.6; for the after period, 81.5.

TOTAL NITROGEN.

The average total nitrogen of the dried feces for the fore period amounted to 1.26 per cent (Series F, III O); for the low benzoate period, to 1.63 per cent; for the high benzoate period, to 1.62 per cent; for the after period, to 1.43 per cent. These variations are roughly parallel with the variations in the intake of nitrogen of the food.

ETHEREAL EXTRACT.

The average daily weights of the ethereal extracts of the dried feces including the fatty acids of the soaps for the various periods were as follows (Series G, III O): For the fore period, 4.74 grams; for the low benzoate period, 6.26 grams; for the high benzoate period, 5.60 grams; for the after period, 6.50 grams.

FAT BALANCE.

The data relating to the fat balance (Series G, III O) are less full in this case than in Case I R or Case II H, the analyses having been made for certain periods only. There is nothing noteworthy about the daily average intake of total fats for the different periods for which the data exist, the difference in the quantities being unimportant.

The percentages of neutral fats, free fatty acids, and fatty acids of soaps of the feces show no important variations for the different periods. The after period shows a rise in the percentage of free fatty acids as compared with the values for the preceding periods. This rise is at the expense of the neutral fats, to a slighter extent at the expense of the soaps. But as these variations are well within the limits of the normal they call for no comment.

If we look at the daily average of the fat absorbed, there is evident the same close correspondence for the various periods that was observable in Cases I R and II H. The figures are as follows:

	Per cent.
Fore period (II)	95.5
Low benzoate period (VII)	95.0
Low benzoate period (X)	94.9
High benzoate period (XIII)	94.0
High benzoate period (XV)	95.6
After period (XVII)	93.7

GENERAL URINARY EXAMINATION.

ALBUMIN.

At no time in the course of the experiment could albumin be detected in the urine, even in traces. Examinations were made with great frequency and regularity.

SUGAR.

At no time in the course of the experiment could sugar be detected in the urine. Examinations were made with great frequency and regularity.

SEDIMENTS.

Calcium oxalate and epithelial cells were frequently noted in the urinary sediments, but not more often during the benzoate periods than during the fore and after periods. Phosphates were frequently seen; uric acid only occasionally. Casts were not observed.

The urines were well preserved in a cool place, were examined within twenty-four hours after being passed, and were subjected to frequent and regular microscopical examination.

SPECIAL URINARY EXAMINATION FOR BENZOIC ACID.

During the high benzoate period the urine was subjected to chemical procedures to detect the presence of benzoic acid or benzoates. It was impossible to detect the presence of benzoic acid in the urine.

SPECIAL CHEMICAL EXAMINATION OF THE FECES.

The data relating to the feces and comprised under the above title pertain to the reaction, the color, the consistence, the mercuric chloride reaction for hydrobilirubin, the *p*-dimethylamido-benzaldehyde reaction for indol and skatol, and the quantitative determination of hydrogen sulphide.

The reaction of the feces was commonly alkaline to litmus, but at times acid and often neutral. The reaction does not appear to have been influenced by the ingestion of sodium benzoate.

The color of the feces was usually brown, sometimes yellow, occasionally black from lampblack used for demarcation. The color of the feces appears to have been uninfluenced by the use of sodium benzoate.

The consistence of the feces varied within normal limits. Diarrheal movements were very rare. (The daily variations in the water content of the feces may be found in the tables relating to Case III O, Series A.) The taking of sodium benzoate apparently had no effect on the consistency of the feces.

The *hydrobilirubin reaction* of the feces was usually slight, moderate, or negative, very rarely strong. The different periods of the experiment show no distinct differences in the intensity of this reaction. There is no indication that the reaction has been in this case influenced by the benzoate whether taken in moderate doses or larger doses.

The *indol reaction* was usually slight to moderately strong, seldom strong. There is no indication that the intensity of this reaction was in any way influenced by the taking of sodium benzoate, since the color reactions for the different periods show little variation.

HYDROGEN SULPHIDE.

Quantitative determinations were made of the hydrogen sulphide of the feces from September 5 to the end of the experiment (see Series I, III O). The figures obtained in the present instance fall well within the limits of the normal. They indicate usually moderate percentages of hydrogen sulphide, seldom high percentages. We are justified in concluding that the fixation of hydrogen sulphide in the feces in this subject was not influenced by the use of large doses of sodium benzoate.

NOTE.—In addition to this chemical examination the feces were subjected to microscopic study to determine whether there were any alterations in their character indicating a diminished absorption of foodstuffs (e. g., meat fiber, fats, etc.) during the benzoate periods. No changes of this character were detectable. Moreover, no increase in mucus was observable and no increase in cellular elements (including leucocytes) derived from the intestinal wall.

BACTERIOLOGICAL EXAMINATION OF THE FECES.

The bacteriological examination of the feces was conducted along the same lines as in Case I R and Case II H. The direct study of the Gram-stained feces showed no significant variations in the flora of the intestine. Slight alterations in type occurred, but they apparently ranged within physiological limits. No changes were noted that could be brought into relation with the ingestion of sodium benzoate. On the other hand, the study of fermentation tube sediments showed an increase in the coccal types of bacteria as compared with the others. This increase in coccal forms corresponded roughly with the depression in gas formation by the mixed fecal bacteria, which was noted in this case. This depression in the gas making function of the bacteria is graphically given in Series K, III O. It is

worthy of notice that immediately after the cessation of the benzoate dosage there was a recovery of the gas forming powers of the fecal bacteria.

A further experiment was conducted with great care in this case to determine whether the depression in the gas forming function of the fecal flora was accidental or due to the sodium benzoate. The subject was kept on a very uniform diet, and while on this diet he took three grams of sodium benzoate daily. The use of sodium benzoate was again followed by a striking decline in the gas formation by the mixed fecal flora, amounting to a complete extinction of this function for a time. There was, however, a gradual recovery of this function despite the continuation of the relatively high benzoate dosage mentioned above.

In the course of the experiment efforts were made by Dr. A. I. Kendall to detect any variations in the nature of the fecal bacteria which might appear in connection with the use of sodium benzoate. Aerobic and anaerobic plate cultures were made with this end in view, but no decisive results were obtained. No evidence was found of a decline in the number of fecal bacteria of the *B. coli* type. On the other hand, there appeared a slight increase in the numbers of the coccal types of bacteria during the time of the benzoate dosage, but this change was not sufficiently marked to be certainly significant.

It is thus clear that large doses of sodium benzoate strongly tend to depress the ability of the fecal bacteria to form gas. The explanation of this fact is not at present clear. The depression in gas formation is certainly not due to the presence of sodium benzoate in the feces, since it was not possible to recover benzoic acid in amounts sufficient to cause such an effect. But it may be due to some action of the benzoate on the bacteria of the digestive tract at higher levels than the colon, or to an action on the digestive juices. Whether the depression of the gas-forming function of the fecal bacteria is to be regarded as a physiological variation which is functionally desirable or undesirable or is a matter of indifference, it is impossible to state at present.

CALORIC VALUES OF THE FOODSTUFFS.

In Case III O the daily averages for the caloric value of the food ingested were as follows (Series H, III O):

	Calories.
For the fore period	2,019
For the low benzoate period	2,763
For the high benzoate period	2,817
For the after period	2,764

These caloric values are somewhat low for the fore period, but adequate in the remaining periods for a man not much above the average weight, leading an indoor life and moderately active in muscular exercise.

SPECIAL CLINICAL DATA.

WEIGHT.

In this case it is noticeable that there was a fall in weight during the fore period when no benzoate was taken. (Series J, III O.) The fall can reasonably be attributed to unusually prolonged and hard hours of work at the outset of the warm season. About the middle of July there developed a tendency to gain in weight and early in August this tendency became established, and is shown in the gradual but almost unbroken rise in weight during the remainder of the low benzoate period and during the entire high benzoate period. This ability of the subject to gain weight during the high benzoate period is worthy of note. There was some further gain during the after period, so that at the end of the experiment the weight approximated that at the beginning of June. Thus there was a complete recovery in weight despite distinctly adverse conditions of labor. (See also Series A, III O.)

EXAMINATION OF THE BLOOD.

HEMOGLOBIN.

From the hemoglobin curve in Chart No. III (Series L) it is clear that the hemoglobin was maintained at a rather uniform level throughout the course of the experiment, with a moderate rise toward the end of the experiment. No evidence of any influence of sodium benzoate is discernible.

RED BLOOD CELLS.

The curve for the red blood cells shows a rise for the low benzoate period, but in general rather uniform results for the entire experimental period. There is no indication of any depressing effect of the benzoate on the red blood cell count. (Series L, Chart III.)

WHITE BLOOD CELLS.

The curve for the white blood cells shows considerable irregularity, including a rise in the low benzoate period, followed by a drop, followed in turn by a considerable rise during the high benzoate period. Whether the benzoate had any influence in causing these irregularities must be considered doubtful in view of the absence of anything characteristic in any of the curves drawn from the four subjects and in view of the fluctuations seen in healthy individuals. (Series L, Chart III.)

The *differential leucocyte count* shows only variations within physiological limits. (Series L, Charts I and II.)

FREE HYDROCHLORIC ACID.

The curve representing the free hydrochloric acid in the gastric juice shows a distinct rise during the high benzoate period, which

brings the values to a point previously reached early in the experiment. (Series L, Chart III.)

SUMMARY OF CONCLUSIONS RELATIVE TO CASE III O.

In stating the conclusions derivable from this investigation relative to the action of sodium benzoate on the human body, it is necessary to distinguish between the effects of small doses (under 0.5 gram daily) and the effects of large doses (over 0.5 gram daily).

ACTION OF SMALL DOSES OF SODIUM BENZOATE.

It may be stated that no action from small doses of sodium benzoate was detectable by the methods employed in this investigation in respect to the following features:

(1) The general health of the subject, as indicated by the subjective and objective signs.
(2) The composition of the urine (with one exception, viz, the physiological effect on the hippuric acid excretion).
(3) The composition of the feces.
(4) The absorption of fats and the fat balance.
(5) The character of the bacteria of the intestinal tract.
(6) The weight of the body.
(7) The hemoglobin of the blood.
(8) The red blood cells.
(9) The white blood cells.

The observed rise in hippuric acid of the urine was such as to be expected from the well-known metabolism of benzoic acid in the animal organism.

ACTION OF LARGE DOSES OF SODIUM BENZOATE.

It may be stated that no definite physiological consequences of large doses of sodium benzoate were detectable by the methods employed in this investigation, except in the following respects:

(1) There was a considerable or large rise in the hippuric acid excretion, such as would be expected from the doses of sodium benzoate ingested.

(2) There was an increase of the indican of the urine, not great, but unmistakable. This rise is possibly attributable to an action of the sodium benzoate—perhaps a slight irritant action in the gastroenteric tract, so altering the secretions and bacteria as to favor intestinal putrefaction.

(3) There was a depression of the gas-producing function of the mixed fecal bacteria in dextrose bouillon.

(4) There was a moderate but apparently unmistakable rise in the proportion of coccal bacteria observed in the fermentation tube sediments derived from the inoculation of the mixed fecal flora.

(5) There was a distinct rise in the free hydrochloric acid of the gastric juice.

CASE IV L.

GENERAL MEDICAL NOTES.

The subject of this experiment was a physician, 28 years of age, of good habits, and of good general health. His weight during previous summers had fluctuated within narrow limits without any accompanying digestive disorders. During the fortnight preceding the beginning of the benzoate experiment his weight varied between 66 and 68 kilos, the weight having spontaneously declined during this time (see graphic weight chart, Series J, IV L).

In this case considerable information was collected in relation to the composition of the urine, the chemical and bacteriological properties of the feces, etc. These observations accord closely with those on the fore and after periods of the experiment.

It should be stated that this subject experienced discomfort, pain, and various signs of disturbed digestion after the passage of the stomach tubé for purposes of gastric examination. During the first two weeks in August he complained of disturbed digestion, malaise, and inaptitude for work, which he attributed to the benzoate taken. The physicians in charge were unable to satisfy themselves that these symptoms were dependent on the benzoate ingested, but believed them to be due to other causes. The disturbances complained of were followed by an acute attack of frontal sinusitis. It should be observed that during the high benzoate period there was a gradual improvement in physical condition; on September 15 there was diarrhea, but after this time the general condition and the state of digestion were excellent.

ANALYTICAL DATA RELATING TO THE URINE AND FECES.

THE URINE.

VOLUME.

The daily volume of urine (Series A, IV L) in this case ranged between 561 and 1,810 c. c. There is no evidence that any influence was exerted on the volume of the urine by the ingestion of sodium benzoate.

SPECIFIC GRAVITY.

The specific gravity of the urine (Series A, IV L) varied between 1.019 and 1.036, and the variations can not be brought into relation with the ingestion of sodium benzoate.

TOTAL NITROGEN.

In this case the average daily output of total nitrogen for the fore period amounted to 16.55 grams (Series B, IV L); for the low benzoate period, to 13.63 grams; for the high benzoate period, to 14.9 grams;

for the after period, to 13.6 grams. It should be noted that the nitrogen excretion during the fore period was rather high as compared with that of the other subjects, especially if we consider them from the standpoint of their weights.

NITROGEN BALANCE.

The data relating to the nitrogen balance in this case are given in table Series F, IV L. They show for the fore period an average daily negative balance (i. e., a lesser nitrogen intake than output) of 1.56 grams, for the low benzoate period a negative balance of 2.14 grams, for the high benzoate period a negative balance of 1.99 grams, for the after period a positive balance of 1.42 grams.

The daily nitrogen intake with the food was as follows:

	Grams.
Fore period	16.00
Low benzoate period	13.60
High benzoate period	17.06
After period	16.74

There is no evidence, derivable from data given in this table that there was any disturbance in nitrogenous metabolism during any of the periods of the experiment.

NITROGEN OF UREA.

We may consider the nitrogen of urea from the standpoint of percentages of total nitrogen (Series D, IV L). We find for the fore period an average of 86.8 per cent; for the low benzoate period, 82.8 per cent; for the high benzoate period, 84.1 per cent; for the after period, 83.5 per cent. These variations being within the limits of the normal, and being in themselves slight, call for no comment.

NITROGEN OF AMMONIA.

The daily average excretion of nitrogen of ammonia was 0.70 gram for the fore period (Series B, IV L), 0.59 gram for the low benzoate period, 0.52 gram for the high benzoate period, and 0.55 gram for the after period. Looking at the nitrogen of ammonia from the standpoint of percentages (Series D, IV L), we find that for the fore period the ammonia nitrogen amounted to 4.2 per cent of the total nitrogen; for the low benzoate period to 4.3 per cent; for the high benzoate period to 3.5 per cent; and for the after period to 4 per cent. The variations in percentages between the different periods are slight and unimportant.

TOTAL PURIN NITROGEN.

Considering the daily average purin nitrogen, we find that this amounted to 0.28 gram for the fore period (Series B, IV L), 0.26 gram for the low benzoate period, 0.27 gram for the high benzoate period,

and 0.25 gram for the after period. These figures indicate a close uniformity in the purin nitrogen excretion throughout the different periods. Considering these values from the standpoint of percentages (Series D, IV L), we find that for the fore period the average purin nitrogen was 1.6 per cent of the total nitrogen; for the low benzoate period, 1.9 per cent; for the high benzoate period, 1.8 per cent; for the after period, 1.9 per cent. These slight variations can not be regarded as other than wholly insignificant in connection with the present investigation.

NITROGEN OF URIC ACID.

The average daily excretion of uric acid nitrogen for the fore period was 0.22 gram (Series B, IV L); for the low benzoate period, 0.22 gram; for the high benzoate period, 0.23 gram; and for the after period, 0.21 gram. Looked at from the standpoint of percentages (Series D, IV L), we find only slight and insignificant variations for the different periods, since the average uric acid nitrogen for the fore period was 1.3 per cent of the total nitrogen; for the low benzoate period, 1.6 per cent; for the high benzoate period, 1.5 per cent; for the after period, 1.5 per cent.

NITROGEN OF CREATININ.

The daily average output of creatinin nitrogen for the fore period was 0.46 gram (Series B, IV L); for the low benzoate period, 0.59 gram; for the high benzoate period, 0.69 gram; for the after period, 0.66 gram. The distinct rise in nitrogen of creatinin during the benzoate periods is noteworthy, inasmuch as it is a concomitant of the fall in total nitrogen. The rise in nitrogen of creatinin is even more noteworthy when we look at it from the standpoint of percentages (Series D, IV L), for we see that while for the fore period the average was 2.8 per cent of the total nitrogen, it was 4.3 per cent for the low benzoate period, 4.6 per cent for the high benzoate period, and 4.9 per cent for the after period. A reference to the table of caloric values of the food (Series H, IV L) shows that the average daily intake of protein for the low benzoate period (85.1 grams) was less than that for the fore period (100 grams). On the other hand, the protein intake for the high benzoate period was greater (106.8 grams daily) than during either of the preceding periods. While there is thus no definite ratio between the creatinin excretion and the total protein intake, it is likely that the explanation in the creatinin fluctuations is to be found in the variations in the quantity of meat ingested.

NITROGEN OF HIPPURIC ACID.

The nitrogen of hippuric acid is best considered in connection with Table IV L, Series E. From this table we see that the average daily amount of benzoic acid ingested, calculated from the sodium

benzoate, amounted to 0.2541 gram for the low benzoate period; we see also that the benzoic acid excreted during this period, and attributable to the benzoic acid intake, amounted to 0.1858 gram. For the high benzoate period the benzoic acid intake was 1.5730 grams, and the calculated amount excreted attributable to this intake amounted to 1.4295 grams.

UNDETERMINED NITROGEN.

The average daily output of undetermined nitrogen for the fore period was 0.76 gram (Series B, IV L); for the low benzoate period, 0.82 gram; for the high benzoate period, 0.63 gram; for the after period, 0.67 gram. The variations are here too small to call for comment. The average percentage of the undetermined nitrogen for the fore period was 4.2 per cent of the total nitrogen; for the low benzoate period, 6 per cent; for the high benzoate period, 4.1 per cent; for the after period, 5 per cent.

TOTAL SULPHUR.

The average daily total excretion of sulphur for the fore period was 1.253 grams (Series B, IV L); for the low benzoate period, 1.024 grams; for the high benzoate period, 1.101 grams; for the after period, 0.977 gram. The variations here are inconsiderable.

INORGANIC SULPHUR.

The daily average output of inorganic sulphur for the fore period was 1.035 grams (Series B, IV L); for the low benzoate period, 0.814 gram; for the high benzoate period, 0.879 gram; for the after period, 0.789 gram. We note here a fall similar to that observed for the total sulphur. Considering the inorganic sulphur in percentages of total sulphur (Series D, IV L), we see that the variations of the averages from period to period are unimportant, being 82.7 per cent for the fore period, 79.5 per cent for the low benzoate period, 79.8 per cent for the high benzoate period, and 80.7 per cent for the after period.

ETHEREAL SULPHUR.

The average daily excretion of ethereal sulphur for the fore period was 0.053 gram (Series B, IV L); for the low benzoate period, 0.055 gram; for the high benzoate period, 0.058 gram; for the after period, 0.048 gram. The variations here are small and insignificant. In the fore period the average ratio between inorganic and ethereal sulphur was 19.7 (Series D, IV L); in the low benzoate period, 14.7; in the high benzoate period, 15.1; in the after period, 17.1. These changes are so small and fall so well within physiological limits that no significance can properly be attached to them.

NEUTRAL SULPHUR.

The average daily output of neutral sulphur amounted to 0.165 gram for the fore period (Series B, IV L), 0.155 gram for the low benzoate period, 0.164 gram for the high benzoate period, and 0.140 gram for the after period. Looking at the neutral sulphur from the standpoint of its percentage of the total sulphur we find that during the fore period the average was 13.1 per cent; for the low benzoate period, 15.1 per cent; for the high benzoate period, 14.9 per cent; for the after period, 14.4 per cent. These variations are small and fall well within the variations observed under strictly physiological conditions and they therefore call for no comment.

PHOSPHATE PHOSPHORUS.

The average daily phosphorus in the form of phosphates of the urine for the fore period was 1.51 grams (Series B, IV L); for the low benzoate period, 1.2 grams; for the high benzoate period, 1.28 grams; for the after period, 1.09 grams. These fluctuations are within normal limits.

INDICAN.

There was in this case a slight rise in the intensity of the indican reactions of the urine during the high benzoate period (Series A, IV L). As the protein intake for this period was somewhat higher than for any other period, the rise in the indican is possibly attributable to increased intestinal putrefaction due to this cause, but the possibility remains that the increased intensity of the reactions was dependent on the high dosage with sodium benzoate.

INDOLACETIC ACID.

Frequent examinations were made for the presence of indolacetic acid. It was found to be present at all times. The reactions were commonly slight, sometimes moderately strong. There was no evidence that the color reactions for indolacetic acid in the urine were in any way influenced by the ingestion of sodium benzoate.

AROMATIC OXYACIDS.

Frequent examinations were made for the presence of aromatic oxyacids. Color reactions were obtainable at all times during the experiment. The reactions were commonly slight, sometimes moderately strong. There was no evidence that the color reactions for aromatic oxyacids in the urine were in any way influenced by the ingestion of sodium benzoate.

CHLORINE AS SODIUM CHLORIDE.

The average daily chlorine excretion calculated as sodium chloride was 11.6 grams for the fore period (Series B, IV L), 11.1 grams for

the low benzoate period, 11.5 grams for the high benzoate period, and 11.9 grams for the after period. There is thus great uniformity for the different periods.

THE FECES.

FRESH.

The daily average weight of the fresh feces for the fore period was 211.9 grams (Series B, IV L); for the low benzoate period, 154.2 grams; for the high benzoate period, 138.9 grams; and for the after period, 138.5 grams.

DRIED.

The daily average weight of the dried feces for the fore period was 34.4 grams (Series B, IV L); for the low benzoate period, 28.9 grams; for the high benzoate period, 26.5 grams; and for the after period, 25.6 grams.

WATER.

The percentage of water in the fresh feces was nearly the same in the different periods (83.7, 81.3, 81.7, 81.2 per cent, Series D, IV L); in other words, the weights of the moist feces were very nearly proportional to the solids.

TOTAL NITROGEN.

The average total nitrogen of the dried feces for the fore period amounted to 1.81 per cent (Series F, IV L); for the low benzoate period to 1.59 per cent; for the high benzoate period to 1.63 per cent; for the after period to 1.47 per cent. These variations are seen to follow rather closely the variations of the intake of nitrogen with the food.

ETHEREAL EXTRACT.

The average daily weights of the ethereal extracts of the dried feces including the fatty acids of the soaps for the various periods were as follows (Series G, IV L): For the fore period, 6.45 grams; for the low benzoate period, 5.09 grams; for the high benzoate period, 4.60 grams; for the after period, 3.73 grams.

FAT BALANCE.

In this case (Series G, IV L) the daily average intake of fat varies rather widely in the different periods, e. g., from 79.5 grams for the low benzoate period to 122.6 grams in the high benzoate period.

The fat of the feces shows only moderate variations for the different periods in respect to the percentage of neutral fats, free fatty acids, and fatty acids of soaps. The figures for these various forms of fat all lie within the limits of the normal. There is no evidence that either small or large doses of sodium benzoate exerted any influence on the percentage of neutral fats, fatty acids, or soaps appearing in the feces.

The data bearing on the absorption of fat from the intestine show nothing worthy of special comment. The proportion of fat absorbed in the different periods varies somewhat more widely than in the other cases. Nevertheless the variations are small and fail to give any evidence that either the small or large doses of benzoate exerted any influence on the fat absorption. The percentage of fat absorbed during the different subperiods is as follows:

	Per cent.
Fore period (II)	95.5
Low benzoate period (VII)	92.6
Low benzoate period (X)	94.5
High benzoate period (XIII)	95.8
High benzoate period (XV)	96.4
After period (XVII)	95.6

GENERAL URINARY EXAMINATION.

ALBUMIN.

At no time in the course of the experiment could albumin be detected in the urine, even in traces. Examinations were made with frequency and regularity.

SUGAR.

At no time in the course of the experiment could sugar be detected in the urine. Examinations were made frequently and regularly.

SEDIMENTS.

Calcium oxalate and phosphates were frequently observed as urinary sediments, but no more often during the benzoate periods than during the fore period and the after period. Epithelial cells were seldom abundant and urates were rare. Casts were not observed.

The urines were well preserved in a cool place, were examined within twenty-four hours after being passed, and were subjected to frequent and regular microscopical examinations.

SPECIAL URINARY EXAMINATION FOR BENZOIC ACID.

During the high benzoate period the urine was subjected to chemical procedures designed to detect the presence of benzoic acid or benzoates. It was impossible to detect the presence of benzoic acid in the urine.

SPECIAL CHEMICAL EXAMINATION OF THE FECES.

The data relating to the feces and comprised under the above title pertain to the reactions, the color, the consistence, the mercuric chloride reaction for hydrobilirubin, the *p*-dimethylamido-benzaldehyde reaction for indol and skatol, and the quantitative determination of hydrogen sulphide.

The reaction of the feces was usually alkaline to litmus, very seldom acid. The reaction does not appear to have been influenced by the ingestion of sodium benzoate.

The color of the feces was usually brown, often yellow or yellow-brown, sometimes black from lampblack or charcoal used for demarcation. The color of the feces appears to have been uninfluenced by the taking of the sodium benzoate.

The consistence of the feces varied usually within normal limits but with a distinct tendency to soft movements with occasional diarrhea.[a] It does not appear that the consistency of the feces was influenced by the ingestion of sodium benzoate, since the consistency of the feces was not diminished during the high benzoate period as compared with the after periods.

The *reaction for hydrobilirubin* was very variable, being sometimes slight, sometimes moderate, sometimes strong or very strong. It does not appear to have been influenced by the use of sodium benzoate. It may be mentioned that in studies on this subject made independently of the present investigation, and some time previously, a distinct tendency was noted toward the development of strong hydrobilirubin reactions.

The *reaction for indol* was usually slight or moderate. The reactions are perhaps a little stronger in the high benzoate period than in the remaining periods. All these reactions are, however, well within the limits observed in persons in what is considered the best of health. The color reactions frequently showed the blue tint pointing to the presence of skatol. This peculiarity had been noticed in this subject during a long period of study prior to the present investigation. It is not connected, therefore, with the ingestion of sodium benzoate.

HYDROGEN SULPHIDE.

Quantitative determinations were made of the hydrogen sulphide of the feces from September 5 to the end of the experiment (see Series I, IV L). The figures obtained in the present instance fall well within the limits of the normal. They indicate only small percentages of hydrogen sulphide, both in the high benzoate period and in the after period. We are thus justified in concluding that the fixation of hydrogen sulphide in the feces of this subject was not influenced by the use of large doses of sodium benzoate.

NOTE.—In addition to this chemical examination, the feces were subjected to microscopic study to determine whether there were any alterations in their character indicating a diminished absorption of foodstuffs (e. g., meat fiber, fats, etc.) during the benzoate periods.

[a] The daily variations in the water content of the feces may be found in the tables relating to Case IV in Series A.

No changes of this character were detectable. Moreover, no increase in mucus was observable and no increase in cellular elements (including leucocytes) derived from the intestinal wall.

BACTERIOLOGICAL EXAMINATION OF THE FECES.

The bacteriological examination of the feces in this case was carried on along the same lines as already mentioned in the cases already discussed. Both the direct examination of the feces and the study of the fermentation tube sediments showed the presence of considerable numbers of cocci. This peculiarity was noted throughout the benzoate experiment, but was somewhat emphasized about the time of the high benzoate period. As, however, this same peculiarity has been noticed in a large number of examinations made in the year preceding the dosage with benzoate, it can be attributed to conditions wholly distinct from the examination itself. The only possibility of an influence on the coccal forms of the feces, exerted by the benzoate, relates to the high benzoate period. It is possible that the moderate increase in coccal forms, noted at this time, was brought about by the rather large doses of sodium benzoate. No other alterations in bacterial types was observable by the methods employed in the investigation.

As will be seen by reference to Series K, IV L, there was observed the smallest gas formation by the fecal flora at the time of the high benzoate dosage. It is probable that the somewhat prolonged tendency to low gas formation, noted at this time, was at least in a measure attributable to the rise in the dose of sodium benzoate.

CALORIC VALUES OF THE FOODSTUFFS.

The daily average for the caloric value of the food ingested was as follows (Series H, IV L):

	Calories.
For the fore period	2, 411
For the low benzoate period	2, 357
For the high benzoate period	2, 982
For the after period	2, 567

These calorific values were adequate but not excessive for a man not much above the average weight, leading an indoor life and moderately active in muscular exercise.

SPECIAL CLINICAL DATA.

WEIGHT.

The variations in weight in Case IV L are readily seen from the inspection of Series J, IV L, where they are graphically represented.

The weight of the subject showed a fall from about 68 kilograms to about 66 kilograms before the low benzoate period was begun. The

occurrence of digestive disorder in this subject has already been mentioned. There was a slight tendency to a rise in weight during the high benzoate period, despite some digestive disorder. (See also Series A, IV L.)

EXAMINATION OF THE BLOOD.

HEMOGLOBIN.

The curve for hemoglobin (Series L, Chart IV) shows a slight tendency to rise during the high benzoate period. There is no evidence that the benzoate has had any deleterious influence on the hemoglobin.

RED BLOOD CELLS.

The curve representative of the numbers of the red blood cells shows a slight tendency to rise during the high benzoate period. There is no reason to suppose that the ingestion of benzoate has had any unfavorable influence on the red blood cells. (Series L, Chart III.)

WHITE BLOOD CELLS.

The white blood cell curve shows only unimportant irregularities, which can not be connected with the ingestion of sodium benzoate. (Series L, Chart III.)

The *differential leucocyte count* shows variations only within the physiological limits. (Series L, Charts I and II.)

FREE HYDROCHLORIC ACID.

The curve showing the free hydrochloric acid of the gastric juice shows a rather marked rise during the high benzoate period. As a comparable rise is evident in all the other subjects, we are disposed to connect it with the ingestion of sodium benzoate. (Series L, Charts III and IV.)

SUMMARY OF CONCLUSIONS RELATIVE TO CASE IV L.

In stating the conclusions derivable from this investigation relative to the action of sodium benzoate on the human body it is necessary to distinguish between the effects of small doses (under 0.5 gram daily) and the effects of large doses (over 0.5 gram daily).

ACTION OF SMALL DOSES OF SODIUM BENZOATE.

It may be stated that no action from small doses of sodium benzoate was detectable by the methods employed in this investigation in respect to the following features:

(1) The general health of the subject as indicated by the subjective and objective signs.
(2) The composition of the urine (with one exception, viz, the physiological effect on the hippuric acid excretion).
(3) The composition of the feces.

(4) The absorption of fats and the fat balance.
(5) The character of the bacteria of the intestinal tract.
(6) The weight of the body.
(7) The hemoglobin of the blood.
(8) The red blood cells.
(9) The white blood cells.

The observed rise in hippuric acid of the urine was such as was to be expected from the well-known metabolism of benzoic acid in the animal organism.

ACTION OF LARGE DOSES OF SODIUM BENZOATE.

It may be stated that no definite physiological consequences of large doses of sodium benzoate were detectable by the methods employed in this investigation, except in the following respects:

(1) There was a considerable or large rise in the hippuric acid excretion, such as would be expected from the doses of sodium benzoate ingested.

(2) There was an increase of the indican of the urine, not great but unmistakable. This rise is possibly attributable to an action of the sodium benzoate (perhaps a slight irritant action in the gastro-enteric tract), so altering the secretions and bacteria as to favor intestinal putrefaction. The behavior of the ethereal sulphates indicates that the rise in intestinal putrefaction is slight.

(3) There was a depression of the gas-producing function of the mixed fecal bacteria in dextrose bouillon.

(4) There was a moderate but apparently unmistakable rise in the proportion of coccal bacteria observed in the fermentation tube sediments derived from the inoculation of the mixed fecal flora.

(5) There was a distinct rise in the free hydrochloric acid of the gastric juice.

SUMMARY OF CONCLUSIONS RELATIVE TO THE GROUP OF PERSONS (FOUR CASES) ON WHICH THIS INVESTIGATION IS BASED.

In stating the general conclusions relative to the action of sodium benzoate on the human body it is necessary to distinguish between the effect of small doses (under 0.5 gram daily) and the effect of large doses (over 0.5 gram daily).

ACTION OF SMALL DOSES OF SODIUM BENZOATE

The following general conclusion may be drawn: No action from small doses of sodium benzoate was detectable by the methods used in this investigation in respect to the following physiological features:

(1) The general health of the subject as indicated by subjective and objective signs.
(2) The composition of the urine (with one exception, viz, the physiological effect on the hippuric acid excretion).

(3) The composition of the feces.
(4) The absorption of fats and the fat balance.
(5) The character of the bacteria of the intestinal tract.
(6) The weight of the body.
(7) The hemoglobin of the blood.
(8) The red blood cells.
(9) The white blood cells.

The observed rise in hippuric acid of the urine was such as was to be expected from the well-known metabolism of benzoic acid in the animal organism.

The methods used in this investigation are confidently believed to be sufficiently varied in scope and sufficiently searching in their specific qualities to have revealed significant modifications of normal physiological processes had such modifications been induced by the use of small doses of sodium benzoate.

The only noteworthy modification of a physiological process which was detected was the rise in the excretion of hippuric acid. This rise can not be regarded as having any pathological significance, since it falls well within physiological limits of function, such as are observable after the free use of natural food (e. g., certain fruits and berries) rich in benzoic acid. Moreover, there is no evidence that the process of synthesis of benzoic acid and glycocoll to hippuric acid entails any direct or indirect effects of a detrimental nature on any part of the human organism, even when the quantity of benzoic acid ingested is larger than that employed in our "low benzoate" period, or indeed in our "high benzoate" period. And, finally, there is no reason to suppose that the synthesis and excretion of hippuric acid in the amounts observed in our "low benzoate" experiments has any injurious effect on the organism even when excretion in such amounts is prolonged for months or years.

The failure to detect significant departures from any physiological processes may safely be taken as a practical certainty that none of the experimental subjects who submitted themselves to our investigation derived any injurious effects therefrom. The fact that the composite curves made from our subjects to indicate the body weight and the hemoglobin percentage show a rise both in weight and in hemoglobin for the entire benzoate experiment (low benzoate period and high benzoate period) is a practical and obvious confirmation of this conclusion derived from two important indices of physiological well being or health.

ACTION OF LARGE DOSES OF SODIUM BENZOATE.

It may be stated that no definite physiological consequences of large doses of sodium benzoate were detectable by the methods employed in this investigation except in the following instances:

(1) There was a considerable or large rise in the hippuric acid excretion, such as would be expected from the doses of sodium benzoate ingested. The significance of this rise has been discussed at sufficient length in the preceding section dealing with small doses of sodium benzoate.

(2) There was an increase of the indican of the urine, not great but unmistakable. This rise, discernible in all four subjects, seems attributable to an action of the sodium benzoate, as other known factors in the experimental conditions fail to satisfactorily account for it. It is perhaps attributable to a slight irritant action on the gastroenteric tract, so altering the secretions or bacteria (or both) as to favor intestinal putrefaction.

(3) There was a depression of the gas-forming function of the mixed fecal bacteria.

(4) There was a moderate but apparently unmistakable rise in the proportion of coccal bacteria observed in the fermentation tube sediment derived from the inoculation of the mixed fecal flora. The precise significance of this phenomenon and of the depression in gas production noted in paragraph (3) is not known, but both conditions are frequently associated with slight or pronounced inflammatory affections of the gastro-enteric tract.

(5) There was a distinct rise in the free hydrochloric acid of the gastric juice. In relation to this feature, Dr. J. S. Thacher makes the following comments:

On reviewing the findings, one result appears rather striking, the marked and, after the first few weeks, fairly continuous increase in the amount of free hydrochloric acid. The observations which I have included among the charts showing the effect of the addition of benzoate of soda to specimens of gastric contents demonstrated, as was to be expected, that the direct effect of such addition is to diminish the amount of free hydrochloric acid. The low figures for free hydrochloric acid in the early weeks and their later increase might *possibly* be accounted for *in part* by the nervous disturbance associated with the unaccustomed procedure of gastric expression and the later diminution of this disturbance as the subject became accustomed to the procedure, but I do not believe that this can account for the great and steady increase in the amounts of free hydrochloric acid. (Excerpt from letter of Dr. J. S. Thacher, dated December 16, 1908.)

If it were necessary to give an opinion as to the cause of the deviations, for the most part slight deviations, from physiological functions, which should account for the phenomena noted in paragraphs 2, 3, 4, and 5, we would offer the hypothesis that the phenomena in question are best accounted for on the supposition that the gastroenteric muscosa in some part of its course had been subjected to slight stimulant or irritative action and that this action was exerted by the continued use of rather large doses of sodium benzoate.

METHODS.

URINE.

PRELIMINARY PROCEDURE.

Each 24-hour sample was collected in a bottle containing 5 c. c. of a 10 per cent solution of thymol in chloroform. The samples during collection and during the period of analysis were kept as much as possible in a refrigerator.[a]

With few exceptions, the urines were collected for periods of 48 and 72 hours. All analyses were made in duplicates on a uniform sample covering the period of collection. The results recorded are uniformly based on a volume representing a 24-hour collection. When the period of collection was 48 hours or longer, the results recorded represent the average for 24 hours.

TOTAL NITROGEN.

The total nitrogen was estimated according to the Kjeldahl method by digesting 5 c. c. of the urine with 20 c. c. concentrated sulphuric acid, a small quantity of copper sulphate and 10 grams of potassium sulphate; distilling alkaline with sodium hydroxide into quarter normal hydrochloric acid; titrating with quarter normal ammonia, using a few drops of an alcoholic solution of alizarin as indicator.

UREA NITROGEN.

The urea nitrogen was estimated according to the method of Folin (American Journal of Physiology, Vol. XIII, p. 45, 1905), digesting one and one-half to two hours, and distilling in somewhat more strongly alkaline solution.

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[a] To test the question of decomposition the ammonia of a given urine thus treated was estimated by Folin's method on successive dates. The following table shows the titrations of the excess of acid, having used the same amount for each determination, with the quarter normal NH_4OH solution:

	June 17.	June 18.	June 19.	June 20.	June 22.
	c. c.	*c. c.*	*c. c.*	*c. c.*	*c. c.*
I	3.85	3.85	3.90	3.95	4.0
II	4.0	3.90	3.90	....	....

In regard to the use of chloroform as possibly affecting the chlorine estimation portions of a freshly voided sample of urine gave in titration, 3.95 c. c. and 3.95 c. c., NH_4CNS solution; portions of the same sample treated with chloroform gave after two days, 3.95 c. c. and 4 c. c. NH_4CNS solution; after five days the titration with NH_4CNS solution amounted to 3.9 c. c. and 4 c. c. The decomposition of chloroform, under the prevailing conditions, with liberation of hydrochloric acid, is therefore a slow one and not of importance in the present investigation.

AMMONIA NITROGEN.

According to Folin (loc. cit.).

TOTAL PURIN NITROGEN.

The uric acid nitrogen was estimated according to the method of Folin (loc. cit.) and the remaining purin nitrogen according to the method of Krüger and Schmidt (Zeitschrift für physiologische Chemie, Band XLV, p. 1, 1905), by precipitating the total purin bodies with sodium bisulphite and copper sulphate solutions, decomposing with sodium sulphide, oxidizing the uric acid with manganese dioxide, precipitating the remaining purin bodies with sodium bisulphite and copper sulphate solutions, and estimating the nitrogen of the precipitate by the Kjeldahl method, using tenth normal acid and alkali and alizarin as indicator.

URIC ACID NITROGEN.

According to Folin (loc. cit.).

CREATININ NITROGEN.

According to Folin (loc. cit.).

HIPPURIC ACID NITROGEN.

To 100 c. c. of urine evaporated practically to dryness on the water bath are added 1.0 gram of acid sodium phosphate, NaH_2PO_4, and about 15 grams of calcium sulphate (gypsum). The finely powdered mass after being thoroughly dried in the oven is transferred to an extraction thimble, and extracted 2 hours with a rapid flow of ethyl acetate in a Soxhlet extractor. The ethyl acetate extract measuring about 100 c. c., completely transferred to a separating funnel, is washed by shaking vigorously with four successive portions of 10 c. c. saturated sodium chloride solution. The washed ethyl acetate solution is transferred to a Kjeldahl flask, 25 c. c. of water are added, the ethyl acetate removed by distillation, and the nitrogen of the hippuric acid residue determined by the Kjeldahl method, using tenth normal acid and alkali, and alizarin as indicator.

UNDETERMINED NITROGEN.

The undetermined nitrogen represents the difference between the total nitrogen and the sum of the nitrogen of the following bodies: Urea, ammonia, purin, creatinin, and hippuric acid.

TOTAL SULPHUR.

Ten cubic centimeters of urine are completely oxidized in a 300 c. c. Kjeldahl flask with 15 c. c. fuming nitric acid according to the method of Schulz (Pflüger's Archiv., vol. 121, p. 114). The total

sulphur in the ash, after dissolving in dilute hydrochloric acid and diluting, is determined according to Folin's method (Journal of Biological Chemistry, vol. 1, p. 131, 1906).

INORGANIC SULPHUR.

According to Folin (loc. cit.).

ETHEREAL SULPHUR.

According to Folin (loc. cit.).

NEUTRAL SULPHUR.

The neutral sulphur was estimated by subtracting the sum of the inorganic and ethereal sulphur from the total sulphur.

PHOSPHATE PHOSPHORUS.

The phosphorus was estimated according to the method described in Neubauer und Vogel's Analyse des Harns, 1890, page 730, by titrating with uranium nitrate in the presence of sodium acetate and acetic acid, using cochineal as indicator.

INDICAN.

According to Folin (American Journal of Physiology, Vol. XIII, p. 45, 1905).

CHLORINE AS SODIUM CHLORIDE.

Volhard's method (Neubauer und Vogel, Analyse des Harns, 1890, p. 705).

ALBUMIN.

The tests employed for the detection of albumin were as follows: The heat test, made by heating a portion of the clear urine with a drop of nitric acid, also by treating the hot clear urine with a drop of trichloracetic acid in a darkened room holding the test tube before a highly illuminated slit; the contact test, made by bringing the clear urine in contact with nitric acid and also with trichloracetic acid without mixing.

SUGAR.

The presence of reducing substances in the urine was tested for by heating the urine with Fehling's solution.

FECES.

The periods during which the feces were collected conformed to the urinary periods and food periods, and were ascertained by marking with lampblack.

WATER.

The feces of one day were intimately mixed and divided into three equal portions. One portion, slightly acidified with sulphuric acid and evaporated to dryness on the water bath and dried in the oven, was used for the estimation of total nitrogen and, incidentally, of water. A second unacidified portion was likewise evaporated to dryness and used for the estimation of total ether extract, including neutral fats, free fatty acids, and the fatty acids of soaps, and also water. The percentage of water of fresh feces recorded in the tables is the average of these two estimations on each sample. The third portion was used for qualitative tests, including hydrobilirubin and indol, for the quantitative estimation of hydrogen sulphide, and for the bacteriological examination.

TOTAL NITROGEN.

Aliquot portions, usually one-tenth, of the finely divided, dried feces from the acidified samples collected during a given period were weighed out and added together. Duplicate analyses for total nitrogen were made on the intimately mixed samples thus obtained by the Kjeldahl method, digesting with concentrated sulphuric acid, copper sulphate, and potassium sulphate.

TOTAL ETHER EXTRACT, NEUTRAL FATS, AND FREE FATTY ACIDS.

Representative samples from aliquot portions of the nonacidified dried feces for the given periods were likewise obtained, and the method employed for the estimation of the total ether extract, including neutral fats, free fatty acids, and fatty acids of soaps, was essentially that described by F. Müller (Zeitschr. f. klinische Medicin, vol. 12, p. 45, 1887), and was as follows:

Two grams of finely divided and thoroughly dried feces were extracted in a Soxhlet condenser 18 to 20 hours with Kahlbaum's low-boiling petroleum ether. The ether extract, representing the neutral fats and free fatty acids, was thoroughly dried and weighed. This extract was then dissolved in petroleum ether and alcohol and the free fatty acids estimated by titrating with a standard solution of potassium hydroxide in alcohol, using phenolphthalein as indicator. The free fatty acids thus measured were calculated as stearic acid.

The contents of the extraction thimble, containing the soaps, were treated with a dilute solution of hydrochloric acid and evaporated to dryness. The finely divided and thoroughly dried residue was extracted with petroleum ether as before, and the dried extract representing the fatty acids of the soaps was weighed. This weight added to the weight of the first extract represents the weight of the total ether extract, or "total fats" recorded in the tables.

Duplicate analyses were made throughout, with the exception of those subperiods in the case of Subjects III O and IV L during which the food was not collected, when single analyses only were made.

HYDROBILIRUBIN.

According to Schmidt (Verhandl. d. Congresses f. inn. Medicin, vol. 13, p. 320, 1895).

A few grams of the fresh feces are rubbed up in a mortar with a solution of mercuric chloride, and the presence and intensity of the reaction noted by the pink or salmon color developed on standing.

INDOL.

Ten grams of fresh feces in 100 c. c. water acidified with sulphuric acid are distilled, and the distillate treated with a few drops of dimethylamido-benzaldehyde solution in dilute sulphuric acid, a pink coloration showing the presence of indol, a blue or violet color showing the presence of skatol.

HYDROGEN SULPHIDE.

A stream of air properly washed is drawn through a suspension of finely divided fresh feces in water acidulated with sulphuric acid, then through a calcium chloride tube containing cotton, and finally through a solution of lead acetate acidulated with acetic acid. The precipitated lead sulphide is filtered, dried, and weighed.

BACTERIOLOGICAL EXAMINATION.

The methods employed are described in the section on the "Bacteriological examination of the feces" relating to Subject I R.

FOOD.

TOTAL NITROGEN.

The total nitrogen of the foods was estimated by the Kjeldahl method, oxidizing with concentrated sulphuric acid, copper sulphate, and potassium sulphate, distilling with concentrated sodium hydroxide and titrating with quarter-normal hydrochloric acid and ammonia, using alizarin as indicator.

Duplicate analyses were made throughout.

For estimating the total nitrogen of all the food material for the different periods two distinct methods were employed during the course of the experiment. For Periods I to V, inclusive, for both Subjects I R and II H nitrogen estimations on the foodstuffs for each day were made.

For all other periods for the four men, including also Period V of Subjects I R and II H, composite samples of the food material were

obtained by taking aliquot portions, usually one-fifth, of each foodstuff consumed and putting it aside preserved with sodium fluoride in a jar. At the close of the period the contents of the jar were rendered uniform by being passed through a fine meat chopper and the total mass weighed without loss. Uniform samples were taken for the estimation of total nitrogen. In Period V, Subjects I R and II H, the two methods gave the following results:

	Subject I R.	Subject II H.
Total nitrogen by analysis of individual foods	97.0	114.1
Total nitrogen of composite samples	96.7	111.7

Closely agreeing results by use of the two methods are reported in Bulletin No. 117, Office of Experiment Stations, U. S. Department of Agriculture (1902), pages 42 and 43.

TOTAL ETHER EXTRACTS, NEUTRAL FATS, AND FREE FATTY ACIDS.

Portions of the composite samples were evaporated to dryness, and the finely divided and thoroughly dried residue extracted with Kahlbaum's low-boiling petroleum ether, following the same procedure as that employed on dried feces for the estimation of total ether extract, including neutral fats and free fatty acids.

CALORIC VALUE.

In Subperiods I to V, inclusive, for Subjects I R and II H, the fuel value for the subperiods was calculated from the individual foods consumed by data obtained from Bulletin No. 28, Office of Experiment Stations, U. S. Department of Agriculture (1906). For the other periods the total weight of dried food, less the ash, was calculated from composite samples. The proteins were calculated by multiplying the nitrogen content by 6.25. The carbohydrates were considered to be represented by the residue after subtracting the proteins, ether extracts, and ash. It was assumed that 1 gram of protein as well as 1 gram of carbohydrate yields 4.1 calories, and 1 gram of fat, 9.3 calories.

APPENDIX.

It is essential to the completeness of this report to append the daily food charts, showing the daily intake of food. In the case of Subjects I R and II H the quantities of the various foods are given for the entire time covered by the investigation. For Subjects III O and IV L the data given relate to a part only of the experimental period. The arrangement of the data relating to the nitrogen of the food, where such data are given, is self-explanatory.

DAILY FOOD CHARTS.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD I.			
June 15, 1908.	*Grams.*		*Grams.*
Soup	188.8	1.15	2.10
Beef	115.9	6.90	8.03
Potatoes	151.1	.89	1.35
Tomatoes	80.4	.14	.11
Vegetables	40.7	.22	.09
Cake	48.6	1.13	.55
Strawberries	173.0	.17	.31
Bananas	110.2	.21	.23
Bread	72.6	1.31	.95
Butter	14.6	.16	.02
Milk	220.0	.59	1.31
	....	....	15.05
June 16, 1908.			
Soup	243.0	.27	.67
Beef	152.5	4.17	6.37
Potatoes	186.8	.32	.54
Eggs	97.1	2.11	2.05
Bacon	40.2	2.14	.86
Tomatoes	89.7	.14	.13
Green peas	19.1	.84	.16
Ice cream	138.6	.77	1.06
Cereal	100.5	.30	.30
Strawberries	111.3	.18	.20
Bread	134.0	1.31	1.76
Butter	28.0	.16	.04
Milk	220.0	.59	1.31
Coffee	113.2	.06	.07
Tea	140.0	.02	.03
	....	....	15.55
June 17, 1908.			
Soup	188.0	.24	.45
Chicken	47.8	4.70	2.24
Beef	96.5	5.06	4.88
Potatoes	125.7	.29	.36
Lettuce	16.0	.19	.03
Pickles	77.0	.11	.09
Cheese	8.2	2.32	.19
Custard	109.2	.98	1.07
Cereal	142.0	.31	.44
Bananas	103.5	.21	.22
Bread	188.4	1.31	2.47
Butter	27.6	.16	.05
Sugar	16.0	....	....
Milk	168.0	.59	1.00
	....	....	13.49

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD I—Con.			
June 18, 1908.	*Grams.*		*Grams.*
Soup	174.1	0.45	0.79
Chicken	82.2	4.72	3.88
Pork chops	32.9	3.99	1.31
Potatoes	97.0	.33	.32
Green peas	51.5	.84	.43
Tomatoes	56.8	.14	.09
Salad	66.2	.19	.12
Rice	42.5	.32	.13
Sauce	38.3	.60	.23
Peaches	148.7	.11	.17
Strawberries	149.3	.18	.27
Cereal	86.8	.32	.28
Milk	440.0	.59	2.62
Bread	221.3	1.31	2.90
Butter	39.2	.16	.06
Sugar	19.4	....	....
	....	....	13.60
June 19, 1908.			
Soup	186.0	.22	.40
Beefsteak	70.0	4.51	3.16
Cold boiled ham	37.1	3.66	1.36
Fried eggs	86.5	2.14	1.83
Potatoes	172.0	.37	.63
Corn flakes	78.5	1.00	.79
Tomatoes	58.7	.14	.09
Lettuce	30.5	.19	.06
Pickles	54.0	.12	.07
Chocolate éclair	45.2	.78	.35
Cereal	121.0	.33	.40
Peaches	154.0	.11	.17
Bananas	116.0	.21	.24
Strawberries	142.5	.16	.26
Milk	740.0	.59	4.40
Bread	226.0	1.31	2.96
Butter	67.6	.16	.11
Sugar	18.6	....	....
	....	....	17.28
June 20, 1908.			
Soup	244.6	.20	.50
Lamb chops	129.2	4.89	6.31
Liver	43.3	4.09	1.77
Bacon	15.0	2.62	.38
Eggs	44.4	2.10	.94
Steak	40.1	4.57	1.83
Potatoes	96.0	.22	.21
Tomatoes	75.2	.14	.11
Lettuce	38.8	.19	.07

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD I—Con.			
June 20, 1908—Cont'd.	*Grams.*		*Grams.*
Pickles	55.5	0.13	0.07
Ice cream	50.0	.58	.29
Cake	84.0	.79	.66
Cereal	169.8	.22	.38
Peaches	223.7	.11	.25
Milk	640.0	.59	3.81
Bread	135.8	1.31	1.78
Butter	21.0	.16	.03
Sugar	65.0	....	....
Strawberries	125.0	.16	.20
	....	....	15.59
June 21, 1908.			
Soup	290.0	.20	.58
Roast beef	151.0	4.18	6.33
Potatoes	134.1	.22	.29
String beans	62.0	.21	.13
Lettuce	39.5	.19	.07
Pickles	26.5	.12	.08
Ice cream	151.6	.58	.88
Cake	29.0	1.11	.32
Milk	470.0	.60	2.80
Bread	96.5	1.30	1.26
Butter	20.7	.16	.03
Coffee	80.0	.06	.05
Sugar	20.0	....	....
	....	....	12.82
June 22, 1908.			
Soup	212.2	.49	1.03
Steak	52.5	4.03	2.12
Roast beef	34.6	3.71	1.28
Lamb chops	31.6	4.20	1.33
Potatoes	151.7	.35	.54
String beans	10.0	.21	.02
Tomatoes	48.9	.14	.07
Lettuce	44.5	.19	.09
Cream puff	82.0	1.06	.87
Pickles	51.7	.12	.06
Cereal	174.2	.37	.63
Strawberries	154.3	.18	.28
Peaches	100.8	.11	.11
Milk	660.0	.60	3.93
Bread	134.4	1.31	1.76
Butter	47.0	.16	.07
Sugar	14.5	....	....
	....	....	14.19
SUBPERIOD II.			
June 23, 1908.			
Soup	213.6	.21	.46
Lamb roast	73.4	4.64	3.33
Lamb chops	57.1	4.64	2.65
Potatoes	194.9	.23	.44
Strawberries	186.0	.18	.34
Peaches	153.5	.11	.17
Milk	660.0	.49	3.24
Bread	93.0	1.31	1.22
Butter	34.1	.16	.06
Sugar	21.4	....	....
	....	....	11.91

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II—Con.			
June 24, 1908.	*Grams.*		*Grams.*
Soup	156.5	0.24	0.38
Steak	92.7	4.33	4.01
Roast lamb	47.6	4.64	2.21
Potatoes	194.4	.30	.59
Tomatoes	66.5	.14	.10
Pickles	55.2	.12	.07
Cream puff	65.3	.95	.62
Corn flakes	27.8	1.07	.31
Peaches	134.5	.11	.15
Strawberries	182.5	.18	.33
Blackberries	117.5	.21	.24
Milk	880.0	.49	4.31
Bread	164.0	1.31	2.15
Butter	50.3	.16	.08
Sugar	22.0	....	....
	....	....	15.55
June 25, 1908.			
Soup	230.0	.49	1.13
Lamb	98.3	4.35	4.27
Ham	33.0	3.91	1.29
Eggs	84.0	2.11	1.77
Potatoes	265.9	.29	.78
String beans	63.0	.24	.15
Lettuce	103.5	.19	.11
Corn flakes	24.7	1.07	.26
Ice cream	143.0	.34	.49
Tarts	79.0	.50	.40
Blackberries	128.5	.21	.27
Milk	660.0	.49	3.23
Bread	109.4	1.31	1.43
Butter	40.8	.16	.07
	....	....	15.65
June 26, 1908.			
Soup	180.0	.32	.58
Fish	96.6	3.33	3.22
Hamburg steak	102.2	3.56	3.64
Boiled potatoes	193.1	.26	.51
Creamed potatoes	139.5	.34	.47
Fried onions	27.3	.34	.09
Cabbage	30.5	.35	.10
Tomatoes	72.8	.14	.11
Cream puff	76.8	.27	.83
Pears	31.0	.10	.31
Peaches	134.5	.11	.15
Corn flakes	29.5	1.07	.32
Milk	220.0	.49	1.08
Bread	142.5	1.31	1.87
Butter	51.0	.16	.08
Sugar	55.7	....	....
	....	....	13.36
June 27, 1908.			
Soup	215.0	.33	.72
Chicken	95.3	4.59	4.37
Boiled ham	22.5	4.71	1.07
Lamb chops	67.2	4.69	3.15
Potatoes	209.6	.47	.99
Tomatoes	105.0	.14	.15
Peaches and custard	151.3	.94	1.42
Peaches	98.4	.11	.11
Blackberries	104.6	.21	.22
Cereal	162.8	.40	.64
Milk	440.0	.49	2.16

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II—Con.			
June 27, 1908—Con.	*Grams.*		*Grams.*
Bread	133.4	1.31	1.75
Butter	39.0	.16	.06
Sugar	83.5		
			16.81
June 28, 1908.			
Soup	229.0	.45	1.05
Chicken	132.9	4.42	5.88
Gravy	29.0	.48	.15
Potatoes	82.0	.70	.57
Beans	64.6	.28	.18
Lettuce	30.2	.19	.06
Jelly	122.6	.18	.22
Cream	23.8	.14	.03
Milk	220.0	.49	1.08
Bread	78.2	1.31	1.02
Butter	20.5	.16	.03
			10.27
SUBPERIOD III.			
July 3, 1908.			
Soup	203.0	.55	1.11
Lamb chops	62.9	4.52	2.84
Roast lamb	50.6	5.25	2.66
String beans	60.8	.21	.02
Baked potatoes	66.0	.64	.42
Tomatoes	125.0	.14	.16
Corn flakes	22.0	1.07	.23
Raspberries	115.0	.12	.13
Peaches	101.0	.11	.10
Muskmelon	130.4	.10	.13
Milk	980.0	.49	4.80
Bread	170.7	1.31	2.24
Butter	66.3	.16	.11
Sugar	95.0		
			14.95
July 4, 1908.			
Soup	199.0	.54	1.08
Lamb chops	83.0	4.75	3.94
Potatoes	50.2	.64	.32
Tomatoes	97.0	.14	.14
Cucumber	36.2	.11	.04
Corn flakes	33.0	1.07	.35
Peaches	440.0	.11	.13
Raspberries	105.7	.16	.17
Milk	660.0	.49	3.23
Cheese	55.1	4.99	2.75
Bread	179.5	1.31	2.35
Butter	12.0	.16	.02
			14.52
July 5, 1908.			
Soup	211.5	.54	1.15
Roast lamb	58.5	5.51	3.22
Lamb chops	38.2	5.50	2.10
Fried potatoes	47.3	1.03	.49
Turnips	94.0	.21	.20
Lettuce	16.5	.19	.03
Peaches	134.1	.11	.15
Bread	95.3	1.31	1.51
Butter	19.1	.16	.03
Sugar	19.0		
Milk	220.0	.49	1.08
			9.96

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD III—Con.			
July 6, 1908.	*Grams.*		*Grams.*
Soup	214.3	0.32	0.71
Roast beef	83.8	3.88	3.25
Ham	23.5	4.43	1.01
Potatoes	160.0	.39	.62
Beets	58.2	.36	.21
Cauliflower	126.4	.37	.47
Lettuce	8.3	.19	.02
Fried eggs	45.8	2.11	.97
Onions	21.0	.16	.03
Corn flakes	26.0	1.07	.28
Orange	85.0	.13	.11
Peaches	123.0	.11	.14
Bananas	115.6	.21	.24
Bread	201.2	1.31	2.64
Butter	69.0	.16	.11
Milk	930.0	.49	4.56
Sugar	90.5		
			15.37
July 7, 1908.			
Soup	163.0	.56	.91
Steak	52.5	5.23	2.75
Roast beef	40.5	5.23	2.12
Mashed potatoes	78.2	.42	.33
French fried potatoes	75.5	.85	.64
Carrots	35.5	.21	.08
Onions, fried	37.0	.69	.26
Tart	82.9	.57	.47
Corn flakes	22.0	1.07	.24
Raspberries	94.5	.16	.15
Blackberries	126.2	.21	.26
Bananas	90.0	.21	.19
Bread	158.7	1.31	2.08
Butter	42.0	.16	.07
Milk	735.0	.49	3.60
Sugar	60.0		
			14.13
July 8, 1908.			
Soup	206.0	.51	1.06
Chicken	72.5	5.14	3.72
Gravy	44.7	.50	.22
Lamb chops	81.5	3.93	3.20
String beans	25.0	.28	.07
Potatoes	183.5	.38	.70
Rice	57.0	.38	.22
Tomatoes	57.5	.14	.08
Lettuce	44.9	.19	.09
Cream puff	71.7	.70	.50
Corn flakes	26.5	1.07	.28
Blackberries	120.5	.21	.25
Orange	98.0	.13	.12
Peaches	122.0	.11	.14
Bread	173.0	1.31	2.27
Butter	58.5	.16	.09
Milk	880.0	.49	4.31
			17.32
July 9, 1908.			
Soup	230.5	.42	.96
Roast lamb	119.5	4.24	5.07
Steak	78.5	4.26	3.34
Boiled potatoes	81.0	.27	.22
Fried potatoes	86.5	.75	.65
Corn	44.7	1.0	.45
String beans	42.1	.21	.12
Tomatoes	63.5	.14	.09

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD III—Con.			
July 9, 1908—Cont'd.	*Grams.*		*Grams.*
Custard	130.6	0.98	1.28
Corn flakes	24.6	1.07	.26
Peaches	132.0	.11	.15
Blackberries	156.8	.21	.33
Bread	132.3	1.31	1.73
Butter	62.6	.16	.10
Milk	660.0	.49	3.23
Sugar	75.0	....	....
Sponge cake	24.0	1.22	.29
	....	....	18.27
SUBPERIOD IV.			
July 10, 1908.			
Soup	178.2	.28	.49
Baked bluefish	79.3	4.69	3.72
Minced lamb	113.5	2.83	3.21
Roast lamb	37.8	4.33	1.64
Fried eggs	80.0	2.05	1.64
Mashed potatoes	105.5	.38	.40
Boiled potatoes	123.0	.25	.31
Tomatoes	102.9	.14	.15
Cucumber	64.7	.13	.08
Cherry pie	124.0	.46	.56
Cake	20.5	1.66	.34
Corn flakes	25.0	1.07	.26
Stewed peaches	123.5	.07	.08
Blackberries	139.0	.21	.29
Bread	180.0	1.31	2.36
Butter	55.2	.16	.09
Milk	880.0	.49	4.31
Sugar	65.0	....	....
	....	....	19.93
July 11, 1908.			
Soup	241.0	.83	2.0
Boiled ham	39.5	3.65	1.44
Beefsteak	63.2	3.76	2.38
Gravy	9.5	.47	.05
Boiled potatoes	77.2	.30	.23
Creamed potatoes	117.0	.28	.33
Fried onions	45.5	.34	.16
Tomatoes	55.0	.14	.08
Lettuce	34.5	.19	.07
Huckelberry pie	120.5	.58	.70
Cherry sauce	114.0	.14	.16
Vanilla wafers	14.5	1.28	.18
Corn flakes	28.0	1.07	.30
Cantaloupe	117.5	.10	.11
Bread	103.2	1.31	1.35
Butter	52.0	.16	.08
Milk	880.0	.49	4.30
Sugar	61.0	....	....
	....	....	13.92
July 12, 1908.			
Soup	206.0	.30	.61
Roast beef	89.5	3.67	3.28
Mashed potatoes	84.9	.35	.30
Tomatoes	10.6	.14	.02
Boiled onions	5.4	.16	.01
Custard	120.1	.88	1.05
Milk	440.0	.49	2.16
Bread	114.7	1.31	1.50
Butter	17.0	.16	.03

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD IV—Con.			
July 12, 1908—Cont'd.	*Grams.*		*Grams.*
Sugar	22.4	....	....
Cucumber	22.9	0.13	0.03
	....	....	8.99
July 13, 1908.			
Soup	139.0	.35	.48
Veal cutlets	78.3	5.14	4.02
Roast beef	52.3	4.28	2.24
Mashed potatoes	123.5	.35	.44
Fried potatoes	44.5	.75	.33
Cauliflower and gravy	66.2	.36	.24
Beets	103.8	.37	.38
Sponge cake	59.0	1.35	.71
Shredded wheat	20.0	1.66	.33
Peaches	100.0	.11	.11
Rhubarb	127.7	.60	.76
Pineapple	118.4	.08	.09
Bread	92.0	1.31	1.20
Butter	38.0	.16	.06
Sugar	40.0	....	....
Milk	660.0	.49	3.23
	....	....	14.62
July 14, 1908.			
Soup	171.0	.33	.57
Steak	71.5	4.12	2.95
Gravy	7.0	.38	.03
Eggs	38.0	2.10	.80
Mashed potatoes	116.8	.30	.35
Green peas	27.0	.13	.03
Fried onions	40.0	.65	.26
Cranberry pie	134.4	.57	.77
Milk	400.0	.49	1.96
Bread	57.5	1.31	.75
Butter	44.5	.16	.03
	....	....	8.50
July 15, 1908.			
Bean soup	196.5	.63	1.23
Lamb chops	78.0	5.03	3.92
Broiled ham	40.3	5.53	2.23
Boiled eggs	67.1	2.11	1.42
Potatoes	215.0	.27	.57
Corn	51.5	.13	.07
Cucumbers	203.0	.13	.26
Lettuce	29.0	.19	.06
Rhubarb pie	130.0	.53	.69
Huckleberry tart	82.3	.63	.52
Corn flakes	23.5	1.07	.25
Cantaloupe	148.5	.10	.14
Peaches	110.4	.11	.12
Bread	117.4	1.31	1.54
Butter	34.6	.16	.06
Milk	660.0	.49	3.23
	....	....	16.29
July 16, 1908.			
Soup	152.7	.33	.50
Chicken	59.0	3.35	1.98
Gravy	41.0	.21	.08
Beefsteak	73.0	4.06	2.96
Potatoes	234.5	.47	1.10

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD IV—Con.			
July 16, 1908—Con.	*Grams.*		*Grams.*
Boiled onions	96.5	0.37	0.35
Carrots	40.5	.17	.07
Tomatoes	60.7	.14	.09
Rice	86.5	.24	.21
Chocolate éclair	61.6	.70	.43
Peaches	102.0	.11	.12
Milk	220.0	.49	1.08
Weak tea	250.0	.10	.25
Bread	231.5	1.31	3.03
Butter	61.0	.16	.10
	....	....	12.35
SUBPERIOD V.			
July 17, 1908.			
Soup	199.5	.40	.80
Codfish	94.1	3.94	3.71
Clam broth	46.3	.21	.10
Clams	21.5	2.10	.45
Halibut	85.2	4.11	3.50
Boiled ham	28.5	4.69	1.38
Mashed potatoes	107.0	.27	.28
Creamed potatoes	90.5	.34	.30
Boiled onions	88.5	.29	.26
Cucumbers	75.0	.13	.10
Stewed plums	85.5	.11	.10
Peaches	103.0	.11	.12
Bread	168.0	1.31	2.20
Butter	80.4	.16	.13
Milk	440.0	.49	2.15
Sugar	19.5	....	....
Huckleberry pie	110.6	.39	.42
	....	....	16.00
July 18, 1908.			
Soup	181.7	.38	.69
Roast beef	70.8	4.40	3.12
Bologna	21.5	2.45	.53
Mashed potatoes	126.2	.26	.32
Fried potatoes	48.5	.34	.17
Tomatoes	80.0	.14	.11
Cucumbers	22.5	.13	.03
Lettuce	31.0	.19	.06
Ice cream	104.0	.66	.69
Cream puff	67.5	.92	.62
Corn flakes	24.6	1.07	.26
Peaches	131.0	.11	.15
Pear	65.5	.05	.03
Bread	152.0	1.31	1.99
Butter	85.5	.16	.14
Milk	440.0	.49	2.15
Sugar	51.5	....	....
	....	....	11.06
July 19, 1908.			
Bologna	48.8	2.45	1.19
Cheese	52.0	4.23	2.20
Pickle	46.5	.10	.04
Milk	900.0	.49	4.41
Bread	48.8	1.31	1.26
	....	....	9.10

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD V—Con.			
July 20, 1908.	*Grams.*		*Grams.*
Soup	182.5	0.60	1.08
Roast lamb	76.5	4.62	3.54
Mashed potatoes	119.0	.28	.33
Boiled potatoes	140.9	.33	.46
Butter beans	55.0	.25	.13
Sour pickle	102.2	.10	.10
Chocolate éclair	55.0	.98	.56
Corn flakes	25.0	1.07	.27
Peaches	122.3	.11	.14
Cantaloupe	93.0	.10	.09
Bread	101.5	1.31	1.33
Milk	660.0	.49	3.24
Butter	66.0	.16	.11
Sugar	34.0	....	....
Beefsteak	91.5	4.01	3.67
	....	....	15.05
July 21, 1908.			
Soup	167.2	.41	.69
Roast beef	64.2	3.52	2.26
Soft-shelled crab	75.0	1.96	1.47
Minced lamb	11.3	1.99	.23
Mashed potatoes	116.0	.37	.43
Creamed potatoes	110.5	.37	.41
Macaroni	74.5	1.12	.83
Sour pickles	60.0	.10	.06
Nut cake	27.6	1.66	.46
Stewed plums	92.7	.11	.11
Corn flakes	21.9	1.07	.23
Watermelon	218.6	.06	.14
Cantaloupe	97.0	.10	.09
Bread	158.4	1.31	2.27
Milk	660.0	.46	3.23
Butter	108.0	.16	.17
Sugar	47.5	....	....
	....	....	13.08
July 22, 1908.			
Soup	249.9	.40	.99
Veal cutlets	88.0	4.42	3.88
Pigeon	77.7	4.40	3.40
Mashed potatoes	109.0	.29	.31
Fried potatoes	65.5	.54	.35
Boiled onions	61.7	.36	.22
Carrots	50.5	.17	.09
Gravy	26.2	.46	.12
Huckleberry pie	84.7	.56	.48
Sponge cake	24.3	1.44	.35
Corn flakes	29.8	1.07	.32
Rhubarb	107.0	.06	.06
Peaches	102.5	.11	.12
Bread	150.1	1.31	1.98
Butter	85.4	.16	.14
Milk	814.0	.49	4.00
Sugar	39.0	....	....
Sour pickle	44.5	.10	.04
	....	....	16.85
July 23, 1908.			
Soup	198.0	.89	1.76
Steak	77.5	4.40	3.41
Bologna	75.0	2.06	1.54
Mashed potatoes	99.7	.28	.28

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD V—Con.			
July 23, 1908—Con.	*Grams.*		*Grams.*
Potato salad	106.0	0.25	0.26
Beets	91.5	.37	.34
Sour pickles	32.5	.10	.03
Pie	90.8	.57	.52
Cream puff	63.5	.94	.60
Corn flakes	19.0	1.07	.20
Peaches	122.5	.11	.24
Bread	172.6	1.31	2.26
Butter	70.7	.16	.11
Sugar	52.0	....	....
Milk	880.0	.49	4.31
	....	....	15.86
SUBPERIOD VI.			
July 24, 1908.			
Bread	174.7	....	....
Butter	69.9	....	....
Milk	660.0	....	....
Peaches	102.6	....	....
Corn flakes	23.0	....	....
Sugar	33.5	....	....
Stewed clams	56.7	....	....
Clam broth	56.0	....	....
Sponge cake	26.0	....	....
Stewed plums	98.8	....	....
Spanish mackerel	232.2	....	....
Soup	202.0	....	....
Cucumber salad	41.5	....	....
String beans	18.3	....	....
Watermelon	243.5	....	....
Potatoes	247.2	....	....
July 25, 1908.			
Bread	176.4	....	....
Butter	72.1	....	....
Milk	620.0	....	....
Sugar	22.0	....	....
Peaches	245.5	....	....
Corn flakes	23.9	....	....
Round beefsteak	45.5	....	....
Bologna	48.2	....	....
Ketchup	7.0	....	....
Gravy	46.5	....	....
Spice cake	34.0	....	....
Lettuce	15.0	....	....
Cucumbers	41.5	....	....
Soup	195.7	....	....
Rice	94.8	....	....
Corned beef	56.2	....	....
Cabbage	68.5	....	....
Peach pudding	108.9	....	....
Potatoes	147.0	....	....
July 26, 1908.			
Ham	46.5	....	....
Swiss cheese	49.0	....	....
Bread	161.0	....	....
Milk	880.0	....	....
Pear	42.0	....	....
Ice cream	55.5	....	....
July 27, 1908.			
Bread	157.9	....	....
Sugar	57.4	....	....
Milk	620.0	....	....

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VI—Con.			
July 27, 1908—Con.	*Grams.*		*Grams.*
Butter	76.0	....	....
Peaches	235.8	....	....
Corn flakes	21.5	....	....
Bologna	38.3	....	....
Rhubarb	26.5	....	....
Beets	77.9	....	....
Corned-beef hash	138.6	....	....
Ketchup	19.5	....	....
Cake	50.0	....	....
Cold slaw	14.6	....	....
Tomato soup	95.5	....	....
Veal cutlets	62.8	....	....
Mashed potatoes	150.5	....	....
Cookies	25.0	....	....
Gravy	28.5	....	....
Sweet pickles	42.0	....	....
July 28, 1908.			
Cantaloupe	313.0	....	....
Bread	160.5	....	....
Butter	88.0	....	....
Milk	400.0	....	....
Sugar	67.1	....	....
Corn flakes	30.4	....	....
Ham	24.5	....	....
Fried eggs	89.5	....	....
Potatoes	194.6	....	....
Pickles	30.5	....	....
Huckleberry tart	88.5	....	....
Coffee	140.5	....	....
Soup	200.2	....	....
Pot roast	24.9	....	....
Gravy	34.0	....	....
Carrots	58.0	....	....
Cornstarch	54.0	....	....
Peach sauce	64.5	....	....
July 29, 1908.			
Bread	64.5	....	....
Butter	30.5	....	....
Sugar	28.5	....	....
Milk	220.0	....	....
Soup	204.7	....	....
Baked potatoes	166.9	....	....
Fried onions	46.5	....	....
Beefsteak	77.7	....	....
Peaches	123.0	....	....
Cake	24.0	....	....
Pickles	29.0	....	....
Bacon	25.8	....	....
Scrambled eggs	125.2	....	....
Blackberry pie	102.9	....	....
July 30, 1908.			
Bread	118.5	....	....
Butter	40.7	....	....
Sugar	30.0	....	....
Milk	440.0	....	....
Peaches	127.0	....	....
Force	26.0	....	....
Soup	170.5	....	....
Roast lamb	78.0	....	....
Mashed potatoes	155.5	....	....
Gravy	10.0	....	....
Rice	80.0	....	....
Cream puff	71.9	....	....
Cantaloupe	122.5	....	....

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VII.			
July 31, 1908.			
	Grams.		*Grams.*
Bread	114.5	....	....
Butter	50.7	....	....
Milk	440.0	....	....
Sugar	23.0	....	....
Peaches	187.3	....	....
Lettuce	47.7	....	....
Clams	12.5	....	....
Clam broth	22.0	....	....
Roast beef	71.7	....	....
Green peas	51.0	....	....
Mashed potatoes	136.7	....	....
Fried potatoes	103.2	....	....
Gravy	5.6	....	....
Stewed plums	130.3	....	....
Cake	23.5	....	....
Cookies	45.0	....	....
Ham	49.0	....	....
Pickles	34.0	....	....
August 1, 1908.			
Bread	129.0	....	....
Butter	57.6	....	....
Sugar	27.0	....	....
Milk	220.0	....	....
Corn flakes	26.0	....	....
Citrate fruit	84.5	....	....
Cucumber	57.5	....	....
Soup	197.0	....	....
Veal cutlets	84.7	....	....
Mashed potatoes	113.6	....	....
Rice	80.7	....	....
Gravy	41.0	....	....
Corn	80.6	....	....
Stewed huckleberries	88.7	....	....
August 2, 1908.			
Bread	220.0	....	....
Ham	129.1	....	....
Cheese	51.8	....	....
Milk	220.0	....	....
August 3, 1908.			
Bread	115.5	....	....
Butter	44.0	....	....
Sugar	40.5	....	....
Milk	660.0	....	....
Cantaloupe	150.0	....	....
Corn flakes	23.8	....	....
Soup	188.0	....	....
Steak	43.5	....	....
Macaroni and cheese	64.5	....	....
Fried potatoes	110.5	....	....
Gravy	3.5	....	....
Fried onions	40.5	....	....
Huckleberry pie	69.7	....	....
Roast-beef hash	79.0	....	....
Poached egg	95.5	....	....
Watermelon	264.0	....	....
August 4, 1908.			
Bread	136.5	....	....
Butter	44.3	....	....
Sugar	31.5	....	....
Milk	880.0	....	....
Watermelon	139.5	....	....
Corn flakes	21.0	....	....
Soup	209.5	....	....

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VII—Continued.			
August 4, 1908—Con.			
	Grams.		*Grams.*
Chicken	44.2	....	....
Pork	18.5	....	....
Mashed potatoes	155.5	....	....
Gravy	36.5	....	....
String beans	55.0	....	....
Stewed plums	77.0	....	....
Cookies	30.0	....	....
Bologna	60.0	....	....
Fried potato cakes	92.3	....	....
Pineapple sauce	139.0	....	....
Sponge cake	32.0	....	....
August 5, 1908.			
Bread	139.0	....	....
Butter	47.0	....	....
Sugar	28.5	....	....
Milk	770.0	....	....
Cantaloupe	172.0	....	....
Corn flakes	33.5	....	....
Cucumbers	91.1	....	....
Soup	204.0	....	....
Roast lamb	90.0	....	....
Baked potatoes	86.0	....	....
Creamed potatoes	81.6	....	....
Gravy	20.0	....	....
Cake	82.2	....	....
Ham	48.0	....	....
Sliced orange	108.3	....	....
August 6, 1908.			
Bread	130.0	....	....
Butter	48.0	....	....
Sugar	64.5	....	....
Milk	880.0	....	....
Cantaloupe	149.0	....	....
Corn flakes	38.0	....	....
Soup	196.0	....	....
Mashed potatoes	141.0	....	....
Fried potatoes	55.0	....	....
Cake	78.0	....	....
Roast beef	74.0	....	....
Gravy	8.0	....	....
Green peas	46.0	....	....
Orange	114.3	....	....
Scrambled egg and ham	135.4	....	....
Bologna	37.5	....	....
Coffee	139.5	....	....
SUBPERIOD VIII.			
August 7, 1908.			
Bread	97.5	....	....
Butter	43.5	....	....
Sugar	42.0	....	....
Milk	880.0	....	....
Cantaloupe	149.5	....	....
Watermelon	144.5	....	....
Force	34.0	....	....
Clam chowder	197.0	....	....
Fried halibut	62.0	....	....
Fried potatoes	135.0	....	....
Baked potatoes	94.5	....	....
Lemon	22.0	....	....
Beets	120.5	....	....
Peach pie	116.0	....	....
Lamb chops	68.2	....	....
Coffee	141.7	....	....

Daily food charts—Continued.

Subject I R.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VIII—Continued.			
August 8, 1908.	*Grams.*		*Grams.*
Bread	106.5	....	....
Butter	45.5	....	....
Sugar	28.0	....	....
Milk	660.0	....	....
Cantaloupe	123.0	....	....
Soup	218.5	....	....
Steak	84.5	....	....
Boiled potatoes	97.0	....	....
Gravy	6.5	....	....
Fried onions	104.0	....	....
Peaches	104.5	....	....
Cake (sponge)	18.5	....	....
August 9, 1908.			
Bread	261.0	....	....
Salmon	82.5	....	....
Tongue	52.3	....	....
Milk	440.0	....	....
August 10, 1908.			
Bread	103.0	....	....
Butter	40.5	....	....
Sugar	47.5	....	....
Milk	730.0	....	....
Cantaloupe	106.0	....	....
Force	29.4	....	....
Tomatoes	10.0	....	....
Soup	214.2	....	....
String beans	57.2	....	....
Mashed potatoes	135.8	....	....
Fried potatoes	126.3	....	....
Veal cutlets	73.2	....	....
Gravy	16.7	....	....
Milk	290.0	....	....
Metropolitan cake	56.5	....	....
Ham	36.3	....	....
Scrambled eggs	87.2	....	....
Coffee	128.0	....	....
Orange	117.5	....	....
August 11, 1908.			
Bread	142.0	....	....
Butter	55.0	....	....
Sugar	36.0	....	....
Milk	440.0	....	....
Cantaloupe	120.0	....	....
Soup	208.0	....	....
Fried codfish	78.5	....	....
Baked potatoes	110.5	....	....
Pickles	29.5	....	....
Apple pie	129.7	....	....
Bologna	71.8	....	....
Beans	88.4	....	....
Stewed pear	124.4	....	....
August 12, 1908.			
Bread	60.7	....	....
Butter	28.5	....	....
Pear	117.5	....	....
Soup	203.5	....	....
Roast lamb	118.0	....	....
Mashed potatoes	131.6	....	....
Creamed potatoes	132.8	....	....
Squash	108.9	....	....
Gravy	10.0	....	....
Orange	97.2	....	....
Milk	440.0	....	....
Lettuce	16.5	....	....
Peach pie	235.0	....	....

Subject I R.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VIII—Continued.			
August 13, 1908.	*Grams.*		*Grams.*
Bread	98.9	....	....
Butter	33.2	....	....
Sugar	45.0	....	....
Corn flakes	27.0	....	....
Milk	880.0	....	....
Soup	198.5	....	....
Beets	87.8	....	....
Steak	43.1	....	....
Baked potatoes	303.8	....	....
String beans	58.8	....	....
Gravy	5.4	....	....
Cream puff	69.0	....	....
Ham	52.8	....	....
Stewed pears	145.3	....	....
Cookies	20.0	....	....
SUBPERIOD IX.			
August 14, 1908.			
Bread	102.6	....	....
Butter	30.9	....	....
Corn flakes	20.4	....	....
Milk	880.0	....	....
Watermelon	270.0	....	....
Lettuce	20.4	....	....
Soup	240.5	....	....
Halibut	88.0	....	....
Potatoes	150.0	....	....
Corned beef	243.5	....	....
Chocolate éclair	32.0	....	....
Peaches	101.0	....	....
Sponge cake	40.5	....	....
Fried eggs	117.5	....	....
Bacon	15.0	....	....
August 15, 1908.			
Bread	65.0	....	....
Butter	21.8	....	....
Corn flakes	23.0	....	....
Cantaloupe	200.6	....	....
Sugar	45.0	....	....
Milk	440.0	....	....
August 17, 1908.			
Bread	93.9	....	....
Butter	25.3	....	....
Corn flakes	31.3	....	....
Milk	880.0	....	....
Peaches	233.2	....	....
Pears	68.5	....	....
Soup	195.0	....	....
Roast lamb	48.5	....	....
Potatoes	110.5	....	....
Spaghetti	103.0	....	....
Gravy	7.5	....	....
Fried eggs	108.6	....	....
Fried potatoes	77.8	....	....
Chocolate cake	46.0	....	....
August 18, 1908.			
Bread	40.5	....	....
Butter	50.5	....	....
Milk	440.0	....	....
Sugar	65.2	....	....
Peaches	103.2	....	....
Corn flakes	25.0	....	....
Lettuce	39.4	....	....
Soup	185.5	....	....

Daily food charts—Continued.

Subject I R.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD IX—Con.			
August 18, 1908—Con.	*Grams.*		*Grams.*
Steak	67.4		
Potatoes	255.7		
Gravy	10.0		
Fried onions	69.0		
Chocolate éclair	28.5		
Bologna	65.5		
Stewed plums	125.2		
August 19, 1908.			
Bread	102.5		
Butter	67.0		
Milk	880.0		
Watermelon	380.3		
Corn flake	29.0		
Soup	197.3		
Roast lamb	58.5		
Potatoes	89.0		
Gravy	17.3		
Corn	152.0		
Cake	30.5		
Lamb chops	56.0		
Fried potatoes	44.5		
Peach pie	139.3		
August 20, 1908.			
Bread	142.8		
Butter	57.0		
Milk	440.0		
Peaches	136.5		
Soup	259.4		
Chicken	57.5		
Rice	100.5		
Sweet potatoes	101.0		
Gravy	32.5		
Peach pie	92.0		
Liverwurst	31.0		
Fried potatoes	52.5		
Scrambled eggs	93.0		
Custard	110.5		
SUBPERIOD X.			
August 21, 1908.			
Bread	150.0		
Butter	64.3		
Milk	440.0		
Peaches	105.5		
Lettuce	25.2		
Soup	232.6		
Baked bluefish	82.0		
Mashed potatoes	127.8		
String beans	46.9		
Chocolate éclair	52.8		
Bologna	53.2		
Potato salad	170.1		
Rice pudding	91.0		
Pineapple	86.2		
August 22, 1908.			
Bread	116.5		
Butter	56.5		
Milk	880.0		
Peaches	125.7		
Corn flakes	28.0		
Soup	280.5		
Potatoes	132.5		

Subject I R.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD X—Con.			
August 22, 1908—Con.	*Grams.*		*Grams.*
Lettuce	10.0		
Steak	67.0		
Gravy	28.0		
Apple pie	142.0		
Pork chops	84.9		
Sweet potatoes	95.0		
Apple sauce	106.0		
August 23, 1908.			
Bologna	92.0		
Bread	226.0		
Ham	62.8		
Cheese	76.0		
August 24, 1908.			
Bread	163.3		
Butter	51.6		
Orange	127.2		
Milk	467.0		
Lettuce	34.4		
Soup	199.6		
Veal cutlets	67.7		
Mashed potatoes	89.3		
Gravy	19.9		
Onions	83.9		
Peach pie	97.3		
Ham	29.8		
Sweet potatoes	80.8		
Scrambled eggs	61.4		
Coffee	153.4		
Sponge cake	37.7		
August 25, 1908.			
Bread	134.5		
Butter	46.0		
Milk	660.0		
Cantaloupe	147.2		
Soup	192.5		
Cucumbers	50.0		
Chicken	90.5		
Potatoes	218.3		
Gravy	28.7		
String beans	37.3		
Neopolitan	51.6		
Stewed pears	116.5		
Lamb chops	60.5		
Macaroni	109.9		
Cake	31.5		
August 26, 1908.			
Bread	79.0		
Butter	41.8		
Milk	248.0		
Soup	216.2		
Roast beef	82.4		
Baked potatoes	98.5		
Gravy	19.2		
Beets	110.2		
Corn	47.5		
Peach tart	48.5		
Bologna	104.1		
Fried potatoes	48.9		
Boiled eggs	77.4		
Coffee	118.0		
Sponge cake	128.0		
Orange	130.0		

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD X—Con.			
August 27, 1908.	*Grams.*		*Grams.*
Bread	239.9		
Butter	60.1		
Milk	440.0		
Orange	127.5		
Cucumbers	119.2		
Soup	228.5		
Steak	66.3		
Sweet potatoes	101.6		
Gravy	8.5		
Custard	153.3		
Lamb chops	102.3		
Creamed potatoes	95.5		
Apple pie	87.5		
SUBPERIOD XI.			
September 2, 1908.			
Bread	94.0		
Butter	33.0		
Pear	66.5		
Milk	660.0		
Stewed pear	132.5		
Lamb chops	89.3		
String beans	56.2		
Boiled potatoes	155.0		
Lettuce	40.0		
Soup	82.6		
Apple sauce	85.1		
Steak	39.5		
Mashed potatoes	120.0		
Onions	45.7		
Apple pie	109.0		
September 3, 1908.			
Bread	151.9		
Butter	27.8		
Pear	45.0		
Soup	241.6		
Lettuce	40.0		
Veal cutlets	62.4		
Mashed potatoes	80.9		
Macaroni	89.0		
Gravy	24.5		
Milk	220.0		
Neapolitan	49.3		
Ham	68.5		
September 4, 1908.			
Bread	149.4		
Butter	50.0		
Milk	660.0		
Orange	134.4		
Soup	266.3		
Lettuce	37.4		
Broiled bluefish	74.2		
String beans	53.2		
Mashed potatoes	128.3		
Chocolate éclair	61.3		
Steak	44.5		
Baked potatoes	111.0		
Sponge cake	21.5		
Peaches	140.5		

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XI—Con.			
September 5, 1908.	*Grams.*		*Grams.*
Bread	116.8		
Butter	50.0		
Milk	660.0		
Peaches	110.0		
Soup	209.5		
Stewed onions	102.5		
Roast lamb	67.9		
Mashed potatoes	105.0		
Gravy	19.0		
Apple pie	125.0		
Ham	53.9		
Eggs	81.7		
Chocolate cake	43.4		
Stewed plums	110.0		
September 6, 1908.			
Bread	215.5		
Ham	189.2		
Milk	1,000.0		
September 7, 1908.			
Bread	193.0		
Butter	53.0		
Milk	660.0		
Corn flakes	21.0		
Peaches	121.8		
Pears	154.0		
Soup	192.2		
Veal cutlets	95.1		
Mashed potatoes	135.0		
Macaroni	118.5		
Gravy	25.0		
Apple pie	115.0		
Ham	44.0		
September 8, 1908.			
Bread	144.7		
Butter	63.2		
Custard (cup)	66.0		
Milk	660.0		
Soup	210.8		
Steak	72.4		
Mashed potatoes	126.0		
Turnips	62.5		
Beets	93.3		
Pears	78.4		
Cheese	25.0		
Bologna	17.5		
Eggs	90.0		
Peaches	74.0		
Cake	31.0		
SUBPERIOD XII.			
September 9, 1908.			
Bread	110.1		
Butter	66.2		
Milk	660.0		
Boiled eggs	86.3		
Soup	211.0		
Roast lamb	67.7		
Mashed potatoes	124.6		
Fried potatoes	34.0		

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XII—Continued.			
September 9, 1908—Con.	*Grams.*		*Grams.*
String beans	66.7		
Gravy	20.0		
Lettuce	44.0		
Chocolate éclair	45.0		
Pears	73.0		
Fried eggs	84.1		
Bacon	30.0		
Peaches	65.5		
September 10, 1908.			
Bread	115.2		
Butter	53.3		
Milk	440.0		
Oranges	117.7		
Oatmeal	133.3		
Pears	32.0		
Soup	223.2		
Steak	76.0		
Carrots	108.0		
Mashed potatoes	125.0		
Lettuce	34.0		
Tapioca	96.7		
Fried ham	46.0		
Creamed potatoes	133.0		
Apple fritters	66.0		
September 11, 1908.			
Bread	58.8		
Butter	28.0		
Milk	560.0		
Eggs	99.2		
Eggs (fried)	49.2		
Soup	208.5		
Halibut	102.5		
Spinach	95.7		
Sweet potatoes	76.8		
Lettuce	70.4		
Chocolate éclair	122.6		
Lamb chops	40.0		
Apple sauce	118.2		
September 12, 1908.			
Bread	117.0		
Butter	36.4		
Milk	660.0		
Oatmeal	163.5		
Peaches	99.7		
Lettuce	58.0		
Soup	187.8		
Steak	35.5		
Turnips	104.9		
Mashed potatoes	87.0		
Apple pie	81.5		
September 13, 1908.			
Bread	167.0		
Butter	17.5		
Milk	1,220.0		
Soup	198.6		
Roast beef	72.5		
Potatoes	95.5		
Gravy	18.0		
String beans	56.3		
Ice cream	91.5		
Ham	79.6		

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XII—Continued.			
September 14, 1908.	*Grams.*		*Grams.*
Bread	96.7		
Butter	47.3		
Milk	660.0		
Orange	52.0		
Cereal	208.2		
Lettuce	30.8		
Soup	247.6		
Lamb chops	72.4		
Mashed potatoes	188.9		
Gravy	10.8		
Onions	85.5		
Apple pie	121.7		
Stewed plum	112.6		
Bacon	117.8		
Scrambled eggs	82.9		
Chocolate cake	51.3		
September 15, 1908.			
Bread	73.7		
Butter	28.7		
Milk	660.0		
Baked apple	81.9		
Cereal	240.3		
Soup	192.4		
Beets	110.9		
Rice	122.8		
Chicken	43.7		
Mashed potatoes	109.8		
Gravy	28.0		
Peach pie	154.1		
Pork chops	62.0		
Apple sauce	139.2		
Cake	44.8		
SUBPERIOD XIII.			
September 16, 1908.			
Bread	80.0		
Butter	36.1		
Cereal	144.3		
Milk	770.0		
Peaches	265.5		
Lettuce	39.4		
Soup	192.1		
Roast lamb	52.0		
String beans	63.5		
Sweet potatoes	152.2		
Gravy	27.7		
Chocolate éclair	56.3		
Fried eggs	89.5		
Ham	16.0		
Sponge cake	36.5		
Creamed potatoes	66.6		
September 17, 1908.			
Bread	78.0		
Butter	30.9		
Milk	660.0		
Cereal	171.5		
Cantaloupe	124.2		
Tomatoes	71.5		
Soup	210.5		
Steak	85.8		
Mashed potatoes	120.0		
Fried potatoes	107.5		
Fried onions	61.5		
Fried eggs	80.3		

Daily food charts—Continued.

Subject I R.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIII—Continued.			
September 17, 1908—Con.	*Grams.*		*Grams.*
Bacon	25.0		
Coffee	111.7		
Cream puff	85.5		
Peach pudding	141.1		
September 18, 1908.			
Bread	110.5		
Butter	27.4		
Milk	660.0		
Cereal	181.0		
Baked apples	73.0		
Cucumbers	63.0		
Soup	255.0		
Boiled salmon	105.8		
Mashed potatoes	157.0		
Turnips	109.0		
Fried eggs	97.1		
Chocolate éclair	54.2		
Cheese cake	71.5		
Coffee	125.5		
September 19, 1908.			
Bread	165.3		
Butter	45.0		
Milk	790.0		
Cereal	174.0		
Stewed plums	80.6		
Ham	73.9		
Soup	206.6		
Onions	61.0		
Chicken	137.4		
Mashed potatoes	97.6		
Gravy	25.5		
Peach pie	58.5		
Coffee	86.3		
September 20, 1908.			
Bread	35.7		
Butter	11.0		
Milk	270.0		
Soup	186.0		
Spinach	100.8		
Roast beef	38.7		
Cake	43.5		
Coffee	130.5		
September 21, 1908.			
Bread	120.5		
Butter	48.0		
Milk	660.0		
Stewed pears	123.5		
Oatmeal	202.3		
Lettuce	29.0		
Soup	204.4		
Lamb chops	93.4		
Fried onions	50.4		
Mashed potatoes	94.0		
Gravy	8.0		
Apple pie	150.4		
Coffee	124.2		
Creamed oysters	101.5		
Chocolate cake	59.5		
Apple sauce	108.9		

Subject I R.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIII—Continued.			
September 22, 1908.	*Grams.*		*Grams.*
Bread	100.3		
Butter	42.5		
Milk	440.0		
Cereal	219.2		
Stewed plums	114.0		
Soup	195.4		
Roast lamb	84.0		
Sweet potatoes	105.1		
Turnips	121.1		
Gravy	16.5		
Custard	120.5		
Coffee	101.0		
SUBPERIOD XIV.			
September 23, 1908.			
Bread	117.6		
Butter	44.5		
Milk	660.0		
Cereal	253.0		
Baked apple	59.9		
Soup	198.5		
Chicken	74.5		
Beets	95.5		
Cauliflower	107.2		
Potatoes	173.8		
Gravy	101.0		
Plum pie	113.3		
Coffee	87.5		
Stewed beef	67.4		
Carrots	37.2		
Apple sauce	155.0		
September 24, 1908.			
Bread	76.7		
Butter	28.4		
Cereal	212.5		
Milk	440.0		
Stewed plums	112.3		
Lettuce	42.0		
Soup	172.0		
Steak	52.0		
Potatoes	103.0		
String beans	53.5		
Cake	126.3		
Fried ham	51.3		
Fried eggs	89.0		
Fried potatoes	76.2		
Apple sauce	92.6		
September 25, 1908.			
Bread	138.1		
Butter	61.5		
Cereal	165.5		
Milk	660.0		
Baked apples	35.6		
Soup	202.1		
Halibut	125.2		
Sweet potatoes	79.6		
Cucumbers	65.9		
Chocolate éclair	48.0		
Coffee	74.5		
Lamb chops	38.0		
Fried potatoes	76.8		
Orange	100.0		
Cheese cake	61.5		

Daily food charts—Continued.

Subject I R.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIV—Continued.			
September 26, 1908.	*Grams.*		*Grams.*
Bread	102.2		
Butter	47.4		
Milk	440.0		
Cantaloupes	137.6		
Cereal	158.0		
Lettuce	32.2		
Soup	245.9		
Steak	36.1		
Onions	44.9		
Cream puff	47.0		
September 27, 1908.			
Bread	47.2		
Butter	14.5		
Biscuits	82.0		
Milk	1,100.0		
Lettuce	56.0		
Soup	175.2		
Cauliflower	120.5		
Roast beef	64.2		
Potatoes	134.1		
Gravy	8.0		
Cake	40.0		
Ice cream (coffee)	69.1		
September 28, 1908.			
Bread	108.0		
Butter	36.0		
Milk	660.0		
Orange	100.5		
Cereal	161.2		
Soup	162.3		
Beefsteak	41.5		
Mashed potatoes	118.8		
Macaroni	112.1		
Gravy	9.5		
Apple pie	103.9		
Fried ham	45.3		
Fried eggs	108.5		
Chocolate cake	58.6		
Cantaloupe	171.5		
SUBPERIOD XV.			
September 29, 1908.			
Bread	66.8		
Butter	29.4		
Cereal	159.7		
Milk	840.0		
Cantaloupe	122.1		
Soup	175.5		
Veal cutlets	76.6		
Sweet potatoes	190.0		
Carrots	82.4		
Gravy	23.0		
Chocolate éclair	60.0		
Pork chops	130.3		
Apple sauce	127.8		
Cake	44.3		
September 30, 1908.			
Bread	89.1		
Butter	34.7		
Cereal	187.4		
Milk	880.0		
Stewed plums	128.9		
Soup	168.4		
Roast lamb	137.8		
Mashed potatoes	254.4		

Subject I R.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XV—Continued.			
September 30, 1908—Con.	*Grams.*		*Grams.*
Gravy	47.0		
String beans	74.4		
Cream puff	59.0		
Fried onions	67.0		
Cake	30.8		
Peaches	69.6		
October 1, 1908.			
Bread	116.0		
Butter	48.6		
Cereal	190.5		
Milk	770.0		
Cantaloupe	100.2		
Soup	193.7		
Veal chops	126.0		
Mashed potatoes	201.8		
Fried onions	106.0		
Gravy	35.5		
Scrambled eggs	110.0		
Fried ham	44.2		
Apple sauce	124.9		
SUBPERIOD XVI.			
October 2, 1908.			
Bread	140.8		
Butter	42.3		
Cereal	123.5		
Orange	89.0		
Milk	760.0		
Soup	237.2		
Celery	22.0		
Oyster plant	91.7		
Halibut	70.2		
Bread pudding	169.2		
Mashed potatoes	174.0		
Corned beef	79.5		
Peaches	161.5		
October 3, 1908.			
Bread	77.4		
Butter	27.3		
Cereal	213.2		
Cantaloupe	170.2		
Milk	660.0		
Soup	201.0		
Lettuce	32.2		
Veal chops	126.0		
Cauliflower	148.5		
Gravy	38.5		
Mashed potatoes	198.5		
Apple pie	218.5		
Coffee	73.9		
Fried eggs	75.0		
Bacon	16.2		
October 4, 1908.			
Bread	41.7		
Butter	19.2		
Cereal	145.0		
Milk	220.0		
Soup	196.5		
Roast beef	39.0		
Potatoes	137.0		
Gravy	6.5		
Onions	65.8		
Ice cream	99.2		
Coffee	82.6		
Cake	45.0		

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVI—Continued.			
October 5, 1908.	*Grams.*		*Grams.*
Bread	101.8		
Butter	43.5		
Cereal	213.1		
Milk	660.0		
Stewed plums	139.0		
Tea	150.0		
Soup	202.4		
Turnips	120.5		
Roast lamb	127.5		
Sweet potatoes	85.3		
Gravy	19.5		
Chocolate éclair	63.0		
Coffee	101.0		
Creamed potatoes	96.2		
Fried eggs	83.3		
Apple sauce	142.8		
Chocolate cake	41.7		
October 6, 1908.			
Bread	118.7		
Butter	41.3		
Milk	560.0		
Oatmeal	135.0		
Stewed plums	109.0		
Tea	92.7		
Soup	172.1		
Lamb chops	53.2		
Mashed potatoes	265.4		
Carrots	63.4		
Gravy	18.8		
Peach cake	58.7		
Coffee	57.2		
Cake	26.0		
Pork chops	72.6		
Peaches	33.0		
SUBPERIOD XVII.			
October 7, 1908.			
Bread	113.4		
Butter	54.5		
Cereal	143.0		
Milk	440.0		
Orange	88.6		
Tea	77.0		
Soup	191.8		
Veal cutlets	63.6		
Potatoes	165.6		
Rice	94.3		
Gravy	67.7		
Coffee	79.1		
Cream toast	47.9		
Pot roast	61.5		
Custard	137.0		
Cauliflower	182.2		
October 8, 1908.			
Bread	97.4		
Butter	42.5		
Cereal	130.3		
Milk	540.0		
Soup	186.6		
Roast beef	45.4		
Mashed potatoes	96.5		
Fried potatoes	29.0		
Cauliflower	85.2		
Gravy	20.2		
Chocolate éclair	66.4		
Coffee	74.8		
Apple pie	102.5		
Fried eggs	79.7		
Bacon	20.5		

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVII—Continued.			
October 9, 1908.	*Grams.*		*Grams.*
Bread	88.2		
Butter	33.4		
Cereal	148.1		
Milk	660.0		
Tea	116.8		
Soup	259.0		
Lamb chops	62.3		
Mashed potatoes	125.7		
String beans	68.3		
Blanc mange	157.1		
Coffee	73.8		
Codfish	114.9		
Sweet potatoes	142.0		
Stewed plums	119.3		
Cake	37.0		
October 10, 1908.			
Bread	71.8		
Butter	33.6		
Cereal	174.6		
Milk	660.0		
Stewed plums	120.3		
Soup	162.8		
Pork chops	73.3		
Potatoes	208.8		
Turnips	148.1		
Gravy	41.8		
Apple sauce	82.3		
Cake	35.2		
Steak	37.8		
Fried onions	70.4		
Bananas	50.6		
Orange	89.2		
October 11, 1908.			
Bread	132.2		
Butter	28.1		
Milk	460.0		
Coffee	74.0		
Soup	140.8		
Roast beef	81.9		
Eggs	164.5		
Mashed potatoes	111.0		
Carrots	53.3		
Cake	28.5		
Ice cream	78.8		
SUBPERIOD XVIII.			
October 12, 1908.			
Bread	75.5		
Butter	39.0		
Cereal	167.0		
Milk	440.0		
Baked apple	158.8		
Soup	168.3		
Roast beef	70.2		
Sweet potatoes	194.1		
Cauliflower	144.4		
Gravy	18.4		
Coffee	178.4		
Chocolate éclair	73.0		
Fried eggs	83.2		
Roast lamb	34.8		
Cake	22.5		

Daily food charts—Continued.

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVIII—Continued.			
October 13, 1908.	*Grams.*		*Grams.*
Bread	92.7		
Butter	36.7		
Cereal	166.0		
Milk	542.0		
Soup	210.4		
Veal cutlets	70.4		
Mashed potatoes	160.1		
Fried potatoes	93.0		
Gravy	35.0		
Turnips	67.0		
Cake in cream	107.7		
Coffee	202.9		
Cake	64.9		
Lamb chops	60.0		
October 14, 1908.			
Bread	98.9		
Butter	47.3		
Milk	550.0		
Grape fruit	77.9		

Subject I R.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVIII—Continued.			
October 14, 1908—Con.	*Grams.*		*Grams.*
Soup	174.5		
Mashed potatoes	175.8		
Fried potatoes	47.8		
Fried onions	55.7		
Gunboat cake	61.0		
Coffee	86.0		
Ham	34.7		
Scrambled eggs	104.7		
Angel cake	159.6		
October 15, 1908.			
Bread	130.0		
Butter	28.3		
Milk	440.0		
Baked apple	78.0		
Soup	190.0		
Roast beef	82.0		
Mashed potatoes	180.0		
Gravy	25.0		
Cake	20.0		

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD I.			
June 16, 1908.	*Grams.*		*Grams.*
Soup	199.4	0.27	0.55
Tomatoes	80.0	.14	.12
Boiled potatoes	102.8	.26	.25
Creamed potatoes	134.4	.33	.44
Meat	181.2	4.49	8.13
Cold boiled ham	34.3	3.34	1.14
Stewed peas	85.3	.84	.71
Ice cream	156.6	.77	1.20
Bread	116.1	1.30	1.53
Butter	21.5	.16	.03
Tea	139.9	.021	.03
			14.13
June 17, 1908.			
Soup	175.2	.24	.42
Boiled chicken	60.8	4.69	2.85
Beef	39.1	5.06	1.97
Pork chops	42.1	4.54	1.91
String beans	52.4	.34	.18
Mashed potatoes	107.1	.29	.31
Fried potatoes	72.2	.28	.20
Cucumbers	87.1	.13	.11
Custard	160.8	.98	1.57
Cereal	175.3	.31	.55
Banana	109.7	.21	.23
Cream cheese	18.6	2.38	.44
Crackers	18.4	1.69	.31
Milk	220.0	.49	1.08
Sugar	32.8		
Bread	224.7	1.31	2.94
Butter	49.8	.16	.08
			15.15

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD I—Con.			
June 18, 1908.	*Grams.*		*Grams.*
Soup	160.2	0.45	0.73
Chicken	87.1	4.72	4.11
Pork chops	51.1	3.99	2.04
Potatoes	82.4	.33	.27
Stewed peas	71.8	.84	.61
Tomatoes	98.3	.14	.14
Rice	28.4	.32	.09
Lettuce	33.1	.19	.07
Banana	149.0	.21	.31
Peaches	143.7	.11	.16
Strawberries	136.3	.18	.25
Cereal	137.3	.32	.44
Sugar	62.0		
Butter	57.1	.016	.09
Milk	765.0	.49	3.75
Bread	247.4	1.31	3.24
			16.30
June 19, 1908.			
Soup	178.2	.22	.39
Beefsteak	105.6	4.51	4.75
Boiled ham	42.1	3.66	1.54
Poached eggs	88.7	2.11	1.87
Potatoes	218.9	.38	.83
Cucumbers	350.8	.13	.45
Lettuce	28.6	.19	.05
Cereal	115.7	.33	.38
Custard	109.9	.98	1.07
Chocolate éclair	67.7	.78	.53
Bananas	78.7	.21	.16
Peaches	143.4	.11	.16
Butter	68.7	.16	.11
Bread	250.9	1.31	3.28
Milk	705.0	.49	3.45
Sugar	58.0		
Tomatoes	63.7	.14	.09
			19.11

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD I—Con.			
June 20, 1908.	*Grams.*		*Grams.*
Soup	217.7	0.20	0.44
Sparerib	130.3	4.89	6.36
Liver	57.9	4.09	2.37
Bacon	4.8	2.62	.13
Steak	49.9	4.57	2.28
Potatoes	109.2	.21	.23
Tomatoes	79.0	.14	.11
Peas, stewed	88.3	1.29	1.14
Lettuce	60.6	.19	.12
Cucumber	28.9	.13	.04
Cereal	145.5	.22	.33
Peaches	239.4	.11	.27
Strawberries	152.5	.18	.28
Bread	222.8	1.31	2.92
Butter	113.3	.16	.18
Milk	660.0	.49	3.23
Sugar	141.3	....	....
	....	....	20.43
June 21, 1908.			
Bread	98.3	1.31	1.29
Butter	29.5	.16	.05
Milk	440.0	.49	2.16
Sugar	40.0	....	....
Roast beef	123.4	4.18	5.16
Potatoes	106.1	.21	.23
String beans	78.5	.21	.16
Lettuce	32.7	.19	.06
Cucumbers	34.3	.13	.04
Soup	217.0	.20	.44
Cake	54.3	1.11	.60
Ice cream	148.1	.58	.86
	....	....	11.05
June 22, 1908.			
Soup	212.3	.49	1.03
Steak	114.3	4.03	4.61
Roast beef	52.4	3.71	1.94
Potatoes (creamed)	81.5	.42	.35
Potatoes	138.2	.25	.34
String beans	57.0	.21	.12
Stewed peas	94.8	1.29	1.22
Tomatoes	42.5	.14	.06
Cucumbers	89.0	.13	.11
Lettuce	52.7	.19	.10
Cereal	164.7	.37	.60
Strawberries	151.4	.18	.27
Peaches	130.0	.11	.16
Cream puff	68.4	1.06	.73
Bread	196.8	1.31	2.59
Butter	60.5	.16	.10
Milk	740.0	.49	3.63
Sugar	86.0	....	....
	....	....	17.96
June 23, 1908.			
Soup	207.3	.21	.44
Roast lamb	99.8	4.64	4.63
Boiled ham	34.0	3.59	1.22
Potatoes	190.8	.23	.45
Onions	57.5	.34	.20
Cereal	164.7	.32	.53
Peaches	323.2	.11	.36
Strawberries	161.5	.18	.30
Bread	149.4	1.31	1.96
Butter	101.0	.16	.16

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD I—Con.			
June 23, 1908—Con.	*Grams.*		*Grams.*
Milk	660.0	0.49	3.24
Sugar	97.5	....	....
	....	....	13.49
SUBPERIOD II.			
June 24, 1908.			
Soup	157.2	.24	.38
Beefsteak	104.3	4.33	4.51
Roast lamb	65.4	4.64	3.04
Mashed potatoes	79.4	.34	.27
Boiled potatoes	67.0	.23	.15
Asparagus	122.4	.29	.35
Cream puff	61.3	.95	.58
Blackberries	126.1	.21	.26
Strawberries	124.4	.18	.23
Bread	188.5	1.31	2.47
Butter	51.0	.16	.08
Milk	300.0	.49	1.47
Sugar	66.5	....	....
	....	....	13.79
June 25, 1908.			
Soup	258.3	.49	1.27
Roast lamb	73.2	4.35	3.19
Boiled ham	44.1	3.91	1.72
Mashed potatoes	116.5	.29	.33
Boiled potatoes	107.3	.30	.32
String beans	86.7	.24	.21
Lettuce	76.6	.19	.15
Ice cream	126.2	.34	.43
Cherry tart	83.4	.50	.41
Corn flakes	23.2	1.07	.25
Blackberries	130.7	.21	.27
Bread	126.8	1.31	1.68
Butter	55.3	.16	.09
Milk	440.0	.49	2.16
Sugar	103.0	....	....
	....	....	12.48
June 26, 1908.			
Soup	194.2	.32	.63
Baked bass	60.2	3.33	2.01
Hamburg steak	93.7	3.56	3.44
Creamed potatoes	141.8	.34	.48
Boiled potatoes	73.8	.26	.19
Raw cabbage	24.7	.35	.09
Stewed peas	64.1	.99	.63
Tomatoes	82.3	.14	.12
Fried onions	31.9	.34	.11
Corn flakes	37.3	1.07	.40
Tapioca with peaches	196.4	.27	.54
Cream puff	80.0	.27	.87
Peaches	161.4	.11	.18
Bread	174.2	1.31	2.27
Butter	70.0	.16	.11
Milk	740.0	.49	3.62
Sugar	118.2	....	....
	....	....	15.69
June 27, 1908.			
Soup	263.9	.33	.87
Chicken	100.0	4.59	4.59
Beef	141.0	4.69	6.61
Boiled ham	29.2	4.71	1.38

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II—Con.			
June 27, 1908—Con.	*Grams.*		*Grams.*
Boiled potatoes	243.6	0.21	0.52
Tomatoes	92.3	.14	.13
Boiled turnips	93.2	.21	.19
Custard	151.3	.96	1.45
Corn flakes	45.2	1.07	.48
Peaches	170.0	.11	.19
Blackberries	132.8	.21	.28
Bread	195.9	1.31	2.62
Butter	54.9	.16	.09
Milk	660.0	.49	3.23
Sugar	144.8		
			22.63
June 28, 1908.			
Bread	384.6	1.31	5.04
Butter	63.9	.16	.11
Milk	950.0	.49	4.66
			9.81
June 29, 1908.			
Soup	225.5	.45	1.02
Meat	79.8	4.47	3.57
Veal rib	85.7	4.42	3.78
Boiled potatoes	66.6	.33	.22
Mashed and fried potatoes	110.4	.36	.40
Gravy	43.7	.47	.21
Stewed peas	69.9	.99	.69
Lettuce	38.5	.19	.08
Tomatoes	85.2	.14	.12
Cream puff	67.2	1.08	.73
Cereal	155.8	.27	.42
Strawberries	129.7	.11	.14
Peaches	92.4	.11	.10
Bread	151.7	1.31	1.04
Butter	57.2	.16	.09
Milk	520.0	.49	2.54
Sugar	118.6		
			15.15
SUBPERIOD III.			
July 3, 1908.			
Soup	188.4	.55	1.03
Lamb chops	27.5	4.52	1.24
Veal	73.7	5.16	3.80
Potatoes	213.0	.63	1.34
String beans	63.9	.21	.13
Tomatoes	95.7	.14	.14
Corn flakes	24.5	1.07	.26
Raspberries	133.5	.12	.16
Peaches	92.5	.11	.10
Bread	218.6	1.31	2.86
Butter	88.3	.16	.14
Milk	760.0	.49	3.72
Sugar	88.6		
			14.92
July 4 and 5, 1908.			
Cheese	131.1	4.99	6.54
Boiled ham	129.9	4.23	5.75
Corn flakes	53.0	1.07	.57
Ginger wafers	61.4	.98	.60
Orange	55.3	.13	.07
Banana	263.2	.21	.55
Raspberries	96.3	.12	.11
Bread	165.9	1.31	2.17

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD III—Continued.			
July 4 and 5, 1908—Con.	*Grams.*		*Grams.*
Butter	101.1	0.16	0.16
Milk	3,000.0	.52	15.59
Milk	300.0	.49	1.47
Sugar	72.2		
			33.58
July 6, 1908.			
Soup	216.2	.32	.68
Roast beef	97.1	3.88	3.78
Cold boiled ham	24.3	4.43	1.07
Fried eggs	45.9	2.05	.94
Boiled potatoes	112.1	.31	.34
Mashed potatoes	177.5	.45	.80
Beets	54.7	.36	.20
Cauliflower	128.0	.37	.48
Onions	17.3	.16	.03
Lettuce	11.0	.19	.02
Cheese	32.3	4.99	1.61
Bananas	81.9	.21	.17
Peaches	114.4	.11	.13
Bread	192.3	1.31	2.52
Butter	67.5	.16	.11
Milk	490.0	.49	2.40
Sugar	19.9		
			15.28
July 7, 1908.			
Soup	181.2	.56	1.01
Steak	131.3	5.23	6.87
Roast beef	73.0	5.23	3.81
Mashed potatoes	127.3	.42	.54
French fried potatoes	95.6	.85	.81
Onions	54.5	.69	.38
Creamed carrots	33.7	.21	.07
Lettuce	20.8	.19	.04
Cucumbers	37.6	.13	.05
Corn flakes	32.0	1.07	.34
Tart	91.3	.57	.52
Blackberries	270.0	.21	.56
Bananas	99.7	.21	.21
Bread	121.2	1.31	1.58
Butter	80.8	.16	.13
Milk	570.0	.49	2.79
Sugar	99.4		
			19.71
July 8, 1908.			
Soup	225.6	.51	1.16
Chicken	74.2	5.14	3.81
Lamb chops	87.5	3.93	3.44
Potatoes, fried	81.5	.28	.23
Potatoes, boiled	130.7	.44	.59
String beans	24.5	.21	.05
Gravy	40.8	.50	.20
Tomatoes	65.8	.14	.10
Lettuce	38.4	.19	.07
Corn flakes	47.3	1.07	.51
Peaches	85.3	.11	.10
Orange	107.8	.13	.14
Blackberries	116.9	.21	.24
Cream puff	70.9	.70	.50
Bread	185.9	1.31	2.43
Butter	86.6	.16	.14
Milk	660.0	.49	3.23
Sugar	23.6		
			16.94

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD III—Continued.			
July 9, 1908.	*Grams.*		*Grams.*
Soup	204.1	0.42	0.85
Roast lamb	107.7	4.24	4.57
Steak	119.2	4.26	5.10
Potatoes	116.0	.27	.32
Potatoes, French fried	100.3	.75	.75
String beans	46.4	.21	.10
Tomatoes	87.2	.14	.13
Custard	107.3	.98	1.05
Blackberries	151.6	.21	.31
Corn flakes	23.0	1.07	.25
Peaches	125.5	.11	.14
Bread	81.9	1.31	1.07
Butter	51.8	.16	.08
Milk	740.0	.49	3.62
Sugar	53.8	....	....
Cake	36.8	1.43	.52
	....	....	18.86
SUBPERIOD IV.			
July 10, 1908.			
Soup	229.4	.28	.63
Baked bluefish	96.3	4.69	4.52
Roast lamb	53.1	4.33	2.32
Fried eggs	87.5	2.05	1.79
Mashed potatoes	112.2	.38	.42
Boiled potatoes	94.4	.25	.24
Minced lamb	116.1	2.83	3.30
Stewed peas	69.4	.99	.69
Sauce	121.1	.07	.08
Cucumbers	78.9	.13	.10
Cherry pie	192.6	.46	.88
Bread	168.5	1.31	2.21
Butter	53.7	.16	.09
Milk	320.0	.49	1.57
Sugar	50.0	....	....
Corn flakes	30.0	1.07	.32
Blackberries	133.0	.21	.28
	....	....	19.44
July 11, 1908.			
Soup	264.9	.83	.22
Boiled ham	35.2	3.65	1.29
Steak	96.5	3.76	3.63
Boiled potatoes	103.8	.29	.30
Potatoes	109.1	.28	.30
Gravy	8.3	.47	.04
Cabbage	97.4	.52	.51
Fried onions	50.6	.34	.17
Tomatoes	173.0	.14	.25
Lettuce	31.0	.19	.06
Huckleberry pie	137.5	.58	.80
Cherry stew	100.7	.14	.14
Vanilla wafer	21.6	1.28	.28
Cantaloupe	183.2	.10	.18
Corn flakes	34.1	1.07	.37
Bread	166.5	1.31	2.18
Butter	48.4	.16	.08
Milk	440.0	.49	2.16
Sugar	42.3	....	....
	....	....	12.96
July 12, 1908.			
Boiled ham	121.0	3.65	4.42
Ice cream	140.0	.53	.74
Banana	142.0	.21	.30
Shredded wheat	52.0	1.66	.86

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD IV—Con.			
July 12, 1908—Con.	*Grams.*		*Grams.*
Peaches	267.0	0.11	0.30
Bread	359.0	1.31	4.70
Milk	950.0	.49	4.65
Sugar	55.0	....	....
	....	....	15.96
July 13, 1908.			
Soup	206.5	.35	.71
Veal cutlets	76.2	5.14	3.91
Roast beef	67.4	4.28	2.88
Gravy	19.2	.21	.04
Beets	140.3	.37	.52
Mashed potatoes	102.9	.35	.36
Fried potatoes	44.5	.75	.34
Cauliflower	92.7	.36	.34
Cake	51.7	1.35	.70
Cheese	35.0	5.71	2.00
Shredded wheat	12.9	1.66	.21
Pineapple	154.0	.07	.11
Rhubarb	135.0	.60	.80
Peaches	128.3	.11	.14
Bread	273.8	1.31	3.58
Butter	80.8	.16	.13
Milk	220.0	.49	1.08
Sugar	95.4	....	....
	....	....	17.85
July 14, 1908.			
Soup	199.0	.33	.66
Steak	116.7	4.12	4.82
Lamb chops	87.3	4.79	4.17
Mashed potatoes	102.5	.30	.31
Boiled potatoes	126.9	.33	.42
Fried onions	46.7	.65	.30
Green peas	28.4	.13	.04
Tomatoes	55.8	.14	.08
Radishes	64.0	.21	.13
Cranberry pie	125.5	.57	.71
Shredded wheat	101.7	1.66	1.77
Peaches	259.9	.11	.29
Bread	382.5	1.31	5.01
Butter	97.2	.16	.16
Milk	1,100.0	.49	5.39
Sugar	103.2	....	....
Crackers	9.3	1.57	.15
	....	....	24.41
July 15, 1908.			
Bean soup	213.2	.63	1.33
Lamb chops	127.8	5.03	6.42
Broiled ham	49.3	5.53	2.73
Potato	231.0	.26	.61
Boiled eggs	93.8	2.11	1.97
Cucumbers	74.9	.13	.10
Lettuce	29.3	.19	.06
Rhubarb pie	137.4	.53	.72
Huckleberry tart	84.8	.63	.53
Corn flakes	30.9	1.07	.33
Peaches	112.7	.11	.13
Cantaloupe	185.9	.10	.17
Bread	446.4	1.31	5.85
Butter	72.7	.16	.11
Milk	440.0	.49	2.16
Sugar	145.4	....	....
	....	....	23.22

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD IV—Con.			
July 16, 1908.	*Grams.*		*Grams.*
Soup	214.0	0.33	0.70
Chicken	74.7	3.35	2.50
Steak	123.9	4.06	5.02
Gravy	38.1	.21	.08
Mashed potatoes	117.9	.32	.38
Baked potatoes	114.1	.63	.72
Carrots	42.5	.17	.07
Rice	87.0	.24	.21
Tomatoes	52.6	.14	.08
Chocolate éclair	60.9	.70	.42
Shredded wheat	56.6	1.66	.93
Peaches	106.5	.11	.12
Cantaloupe	113.7	.10	.12
Bread	238.5	1.31	3.13
Butter	85.4	.16	.14
Milk	660.0	.49	3.23
Sugar	69.4	....	....
	....	....	17.85
SUBPERIOD V.			
July 17, 1908.			
Soup	179.9	40	.72
Fried codfish	92.6	3.94	3.64
Clam broth	46.3	.21	.10
Clams	8.8	2.10	.19
Halibut	160.2	4.11	6.58
Mashed potatoes	106.2	.27	.28
Creamed potatoes	90.2	.34	.30
Cucumbers	87.4	.13	.11
Stewed plums	95.2	.11	.11
Cranberry tart	57.1	.41	.23
Corn flakes	35 5	1 07	.38
Peaches	104.9	.11	.12
Cantaloupe	275.9	.10	.27
Bread	173.8	1.31	2 27
Butter	96 5	.16	.15
Sugar	69.4	....	....
	....	....	15.45
July 18, 1908.			
Soup	181.7	.38	.69
Roast beef	109.9	4.40	4.82
Bologna sausage	22.8	2.45	.56
Cheese	16.8	4.23	.71
Mashed potatoes	150.0	.26	.38
Tomatoes	210.5	.14	.30
Lettuce	28.6	.19	.06
Sour pickles	11.6	.10	.01
Cream puff	66.8	.92	.61
Ice cream	126.2	.66	.83
Pears	98.3	.05	.05
Bread	124.8	1.31	1.64
Butter	45.7	.16	.07
Milk	440.0	.49	2.16
Sugar	36.9	....	....
	....	....	12.89
July 19, 1908.			
Bread	310.0	1.31	4.06
Butter	33.0	.16	.05
Sugar	35.0	....	....
Bologna sausage	95.0	2.45	2.33
Cheese	119.0	4.23	5.02
Milk	946.0	.49	4.63
Peaches	200.0	.11	.22
Sour pickle	39.0	.10	.04
	....	....	16.35

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD V—Con.			
July 20, 1908.	*Grams.*		*Grams.*
Soup	199.9	0.60	1.19
Roast lamb	114.2	4.62	5.31
Beefsteak	142.0	4.01	5.71
Mashed potatoes	86.8	.28	.24
Boiled potatoes	179.0	.33	.59
Tomatoes	170.4	.14	.25
Butter beans	67.9	.25	.17
Corn flakes	44.1	1.07	.47
Peaches	234.0	.11	.26
Chocolate éclair	60.6	.98	.59
Milk	440.0	.49	2.15
Bread	105.9	1.31	1.38
Butter	55.9	.16	.10
Sugar	60.5	....	....
	....	....	18.41
July 21, 1908.			
Soup	124.2	.41	.51
Roast beef	109.2	3.52	3.84
Soft-shell crab	119.3	1.96	3.34
Minced lamb	86.2	1.99	1.72
Potatoes	243.2	.37	.90
Macaroni	89.9	1.12	1.01
Sponge cake	28.6	1.66	.48
Stewed plums	12.6	.11	.01
Corn flakes	45.0	1.07	.48
Watermelon	489.4	.06	.31
Peaches	98.3	.11	.11
Milk	660.0	.49	3.23
Bread	162.1	1.31	2.13
Butter	88.0	.16	.14
Sugar	83.2	....	....
	....	....	18.21
July 22, 1908.			
Soup	268.6	.40	1.07
Veal cutlets	78.7	4.42	3.47
Pigeon	81.6	4.40	3.59
Mashed potatoes	98.1	.29	.28
French-fried potatoes	96.2	.54	.52
Tomatoes	214.6	.14	.31
Creamed carrots	45.5	.17	.08
Huckleberry pie	122.5	.56	.69
Rhubarb	121.4	.06	.07
Peaches	100.0	.11	.11
Milk	660.0	.49	3.23
Bread	183.5	1.31	2.41
Butter	81.0	.16	.13
Sugar	71.5	....	....
Sponge cake	57.0	1.45	.82
	....	....	16.78
July 23, 1908.			
Soup	214.2	.89	1.90
Steak	154.5	4.40	6.82
Bologna	57.5	2.06	1.18
Boiled eggs	42.5	2.11	.92
Potatoes	158.2	.29	.46
Potato salad	204.9	.25	.50
Pickled beets	121.5	.37	.45
Tomatoes	167.5	.14	.24
Current pie	118.8	.57	.68
Cream puff	66.0	.94	.62
Peaches	227.7	.11	.26
Bread	143.9	1.31	1.88
Butter	74.6	.16	.12
Sugar	91.6	....	....
	....	....	16.03

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VI.			
July 24, 1908.	*Grams.*		*Grams.*
Soup	208.3		
Clam broth	73.0		
Clams	83.2		
Fried mackerel	228.7		
Potatoes	276.1		
String beans	101.8		
Tomatoes	100.9		
Sponge cake	45.8		
Shredded wheat	61.6		
Watermelon	409.5		
Stewed plums	98.9		
Olives	18.3		
Milk	660.0		
Butter	53.8		
Bread	185.9		
Peaches	101.0		
Sugar	79.6		
July 25, 1908.			
Pot roast	87.0		
Bologna	36.8		
Beef	94.6		
Gravy	150.5		
Potatoes	164.5		
Peas	80.4		
Chocolate cup cake	51.4		
Peaches	384.8		
Bread	228.7		
Butter	80.2		
Milk	220.0		
Sugar	80.7		
July 26, 1908.			
Pot roast	71.0		
Fried eggs	76.0		
Mashed potatoes	63.0		
Tomatoes	65.0		
Lettuce	40.6		
Ice cream	160.0		
Pine apple	82.0		
Biscuits	69.0		
Bread	45.0		
Butter	31.0		
Milk	220.0		
Sugar	15.0		
July 27, 1908.			
Soup	248.0		
Veal cutlets	132.1		
Bologna	33.2		
Cornbeef hash	165.1		
Potatoes	114.7		
Cabbage	54.8		
Beets	83.1		
Shredded wheat	56.4		
Cooky	49.9		
Cake	60.5		
Peaches	232.5		
Rhubarb	94.3		
Milk	440.0		
Bread	184.9		
Butter	93.7		
Sugar	112.4		
July 28, 1908.			
Soup	200.2		
Pot roast	68.7		
Ham	30.0		

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VI—Con.			
July 28, 1908—Con.	*Grams.*		*Grams.*
Poached eggs	84.0		
Potatoes	169.1		
Carrots	51.7		
Salad	59.2		
Sauce	59.7		
Tart	95.9		
Cornstarch	141.4		
Peaches	303.7		
Bread	280.7		
Milk	490.0		
Coffee	249.0		
Sugar	51.9		
Butter	114.2		
July 29, 1908.			
Soup	205.1		
Steak	82.8		
Bacon	41.6		
Scrambled eggs	117.0		
Baked potatoes	86.9		
Tomatoes	105.5		
Celery	25.6		
Boiled potatoes	67.9		
Fried onions	67.5		
Sponge cake	49.6		
Blackberry pie	110.0		
Radishes	26.2		
Peaches	215.4		
Bread	259.8		
Butter	106.0		
Milk	440.0		
Sugar	76.5		
SUBPERIOD VII.			
July 31, 1908.			
Roast beef	179.0		
Fried potatoes	108.3		
Mashed potatoes	146.7		
Gravy	8.0		
Green peas	71.0		
Tomatoes	109.3		
Cookies	42.0		
Sponge cake	56.1		
Plum sauce	130.3		
Lettuce	54.7		
Peaches	219.3		
Milk	220.0		
Bread	110.8		
Butter	48.3		
Sugar	46.2		
August 1, 1908.			
Soup	188.0		
Veal cutlets	77.7		
Gravy	28.9		
Fried ham	55.8		
Fried eggs	94.5		
Potatoes	127.8		
Cucumbers	178.6		
Rice	77.9		
Tomatoes	101.7		
Stewed huckleberries	115.6		
Sponge cake	27.2		
Grapefruit	78.8		
Milk	220.0		
Bread	222.9		
Butter	31.7		

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VII—Con.			
August 1, 1908—Con.	*Grams.*		*Grams.*
Sugar	77.5		
Coffee	174.8		
August 2, 1908.			
Ham	120.0		
Cheese	100.0		
Bread	261.0		
Ice cream	103.0		
Peaches	85.0		
Milk	880.0		
Sugar	29.0		
Butter	10.0		
August 3, 1908.			
Soup	189.2		
Steak	116.7		
Hash	102.9		
Poached eggs	99.7		
Potatoes	137.9		
Gravy	6.8		
Onions	49.5		
Macaroni	73.1		
Olives	27.2		
Huckleberry pie	120.0		
Sauce	49.0		
Watermelon	440.0		
Peaches	91.8		
Milk	880.0		
Bread	196.2		
Butter	68.2		
Sugar	62.8		
August 4, 1908.			
Chicken	76.7		
Pork	23.1		
Bologna	51.1		
Cheese	22.7		
Fried potatoes	161.5		
Mashed potatoes	219.5		
Soup	198.3		
String beans	65.0		
Stewed plums	93.2		
Force	57.5		
Cake	53.2		
Cooky	39.2		
Pineapple	141.0		
Watermelon	203.6		
Bread	284.7		
Butter	14.2		
Sugar	290.0		
August 5, 1908.			
Soup	203.4		
Roast lamb	102.2		
Ham	51.7		
Gravy	20.6		
Boiled potatoes	84.6		
Creamed potatoes	82.4		
Vanilla éclair	57.8		
Cake	28.7		
Oranges	245.6		
Bread	243.6		
Butter	88.6		
Milk	660.0		
Sugar	56.5		

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VII—Con.			
August 6, 1908.	*Grams.*		*Grams.*
Soup	192.2		
Roast beef	140.0		
Bologna	28.9		
Scrambled eggs and ham	120.7		
French fried potatoes	70.5		
Boiled potatoes	123.5		
Gravy	10.5		
Peas	53.6		
Force	53.0		
Plum sauce	112.2		
Sponge cake	50.4		
Cookies	48.6		
Sliced oranges	240.0		
Milk	855.0		
Coffee	119.4		
Bread	300.5		
Butter	74.1		
Sugar	60.0		
Pear	82.9		
SUBPERIOD VIII.			
August 7, 1908.			
Lamb chops	53.5		
Soup	114.4		
Fried halibut	113.1		
Mashed potatoes	150.8		
Beets	74.7		
Corn	184.8		
Peach pie	169.1		
Watermelon	223.9		
Sliced oranges	113.6		
Milk	290.0		
Coffee	126.3		
Bread	209.1		
Butter	146.4		
Sugar	280.8		
August 8, 1908.			
Soup	218.9		
Steak	130.1		
Gravy	6.4		
Salmon	60.0		
Baked potatoes	128.5		
Onions	117.4		
Peas	225.0		
Sponge cake	21.4		
Peaches	105.2		
Watermelon	206.4		
Force	61.2		
Bread	244.2		
Butter	97.2		
Sugar	71.9		
August 9, 1908.			
Salmon	61.0		
Tongue	149.0		
Cheese	58.0		
Tomatoes	95.0		
Sour pickles	39.0		
Watermelon	273.0		
Ice cream	131.0		
Cake	51.0		
Bread	307.0		
Milk	946.0		
Peaches	154.0		
Sugar	37.0		

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VIII—Continued.			
August 10, 1908.	*Grams.*		*Grams.*
Soup	184.2		
Veal cutlets	97.2		
Fried ham	37.3		
Scrambled eggs	78.9		
Mashed potatoes	52.2		
Boiled potatoes	120.0		
Gravy	23.0		
Tomatoes	86.3		
Ice cream	81.1		
Cake	24.7		
Force	43.7		
Sliced oranges	245.7		
Milk	490.0		
Coffee	138.7		
Bread	176.7		
Butter	62.4		
Sugar	88.2		
August 11, 1908.			
Soup	335.1		
Fried codfish	99.5		
Bologna	70.8		
Beans	140.4		
Potatoes	104.1		
Cucumbers	76.2		
Peas	128.5		
Sauce	140.4		
Cake	45.1		
Apple pie	173.7		
Force	36.4		
Pears	249.5		
Bread	193.4		
Butter	66.7		
Milk	220.0		
Coffee	138.7		
Sugar	61.7		
August 12, 1908.			
Soup	206.6		
Roast lamb	140.8		
Gravy	19.7		
Boiled potatoes	131.9		
Cream potatoes	129.7		
Squash	82.7		
Lettuce	22.1		
Peach pie	120.8		
Cheese	36.4		
Crackers	27.2		
Cake	40.4		
Force	46.0		
Sliced orange	158.6		
Pears	136.4		
Plums	60.5		
Milk	440.0		
Bread	189.0		
Butter	72.2		
Sugar	75.3		
August 13, 1908.			
Soup	194.0		
Steak	132.8		
Minced lamb	125.3		
Baked potatoes	123.3		
Mashed potatoes	158.8		
String beans	59.7		
Beets	120.2		

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VIII—Continued.			
August 13, 1908—Con.	*Grams.*		*Grams.*
Gravy	4.0		
Cream puff	92.9		
Cookies	48.5		
Cheese	24.3		
Stewed pears	117.2		
Milk	220.0		
Bread	108.7		
Butter	55.2		
Sugar	11.1		
SUBPERIOD IX.			
August 14, 1908.			
Soup	236.2		
Halibut	117.2		
Bacon	23.3		
Fried eggs	95.3		
Mashed potatoes	129.5		
Chocolate éclair	41.3		
Force	53.9		
Lettuce	32.4		
Peaches	121.7		
Milk	440.0		
Watermelon	325.3		
Bread	208.4		
Butter	69.3		
August 15, 1908.			
Soup	196.5		
Chicken	88.5		
Mashed potatoes	127.2		
Corn	75.3		
Tomatoes	119.9		
Cake	34.2		
Shredded wheat	28.8		
Peaches	165.4		
Milk	660.0		
Bread	200.7		
Butter	72.9		
Sugar	48.5		
August 16, 1908.			
Ham	122.0		
Bologna	125.0		
Cheese	53.0		
Tomatoes	91.0		
Lettuce	66.0		
Sour pickles	72.0		
Ice cream	130.0		
Cake	48.0		
Milk	946.0		
Peaches	135.0		
Bread	349.0		
Butter	45.0		
August 17, 1908.			
Soup	161.9		
Fried eggs	84.4		
Potatoes	58.1		
Milk	440.0		
Peaches	103.9		
Bread	77.3		
Butter	20.5		
Sugar	23.5		

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD IX—Continued.			
August 18, 1908.	*Grams.*		*Grams.*
Soup	195.1		
Steak	134.6		
Gravy	9.7		
Bologna	59.6		
Mashed potatoes	102.5		
Cream potatoes	126.6		
Fried onions	87.8		
Lettuce	27.6		
Chocolate éclair	31.5		
Cookies	24.5		
Plums	151.6		
Watermelon	170.7		
Peaches	117.7		
Milk	660.0		
Butter	40.3		
Bread	136.4		
Sugar	63.7		
August 19, 1908.			
Soup	196.2		
Pot roast	106.0		
Gravy	17.0		
Lamb chops	82.2		
Potatoes	216.1		
Tomatoes	86.2		
Peach pie	130.3		
Cake	32.7		
Watermelon	262.4		
Peaches	98.1		
Plums	126.7		
Force	51.9		
Milk	440.0		
Bread	127.5		
Butter	60.3		
Sugar	50.0		
August 20, 1908.			
Soup	240.3		
Chicken	79.5		
Liver wurst	26.9		
Scrambled eggs	116.4		
French fried potatoes	51.4		
Sweet potatoes	107.2		
Rice	125.5		
Custard	104.2		
Peach pie	93.5		
Peaches	125.4		
Bread	233.8		
Butter	84.3		
Milk	220.0		
Sugar	32.8		
SUBPERIOD X.			
August 21, 1908.			
Boiled bluefish	60.4		
Bologna	70.2		
Boiled eggs	78.2		
Potato salad	168.7		
Mashed potatoes	145.4		
String beans	65.7		
Lettuce	24.9		
Chocolate éclair	49.6		
Rice pudding	80.6		
Force	61.4		
Pineapple	90.3		
Peaches	105.7		

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD X—Continued.			
August 21, 1908—Con.	*Grams.*		*Grams.*
Milk	660.0		
Bread	249.8		
Butter	81.8		
Sugar	46.3		
August 22, 1908.			
Soup	287.8		
Steak	104.1		
Gravy	79.7		
Mashed potatoes	114.5		
Squash	105.1		
Lettuce	20.5		
Pie	232.6		
Grapes	22.7		
Peaches	116.3		
Milk	440.0		
Bread	176.3		
Butter	88.3		
Sugar	60.0		
Pork chops	54.0		
Sweet potatoes	57.2		
Apple sauce	109.9		
Cooky	27.2		
August 23, 1908.			
Ham	59.0		
Bologna	164.0		
Tomatoes	107.0		
Lettuce	60.0		
Ice cream	172.0		
Bread	230.0		
Butter	20.0		
Milk	771.0		
August 24, 1908.			
Soup	179.9		
Veal cutlets	103.3		
Broiled ham	49.1		
Scrambled eggs	59.0		
Potatoes	112.9		
Sweet potatoes	191.7		
Boiled onions	93.3		
Lettuce	28.1		
Pie	128.8		
Stewed plums	100.0		
Cake	38.9		
Orange	110.0		
Milk	270.0		
Bread	178.8		
Butter	78.2		
Sugar	41.0		
Coffee	138.9		
August 25, 1908.			
Soup	207.2		
Chicken	85.2		
Gravy	24.2		
Lamb chops	60.5		
Mashed potatoes	89.3		
String beans	53.1		
Stewed peas	140.7		
Cream potatoes	129.0		
Macaroni	150.6		
Cucumbers	73.7		
Cake	32.5		
Ice cream	53.5		

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD X—Con.			
August 25, 1908—Con.	*Grams.*		*Grams.*
Orange	115.1		
Milk	660.0		
Bread	232.0		
Butter	83.1		
Sugar	40.0		
August 26, 1908.			
Soup	272.8		
Roast lamb	109.7		
Gravy	21.2		
Bologna	98.9		
Boiled eggs	85.5		
French fried potatoes	46.1		
Boiled potatoes	142.1		
Cake	26.5		
Sliced orange	137.9		
Peaches	122.4		
Force	18.4		
Milk	710.0		
Cream rolls	45.8		
Bread	737.2		
Butter	94.0		
Sugar	40.0		
Coffee	128.6		
Beet	103.6		
August 27, 1908.			
Soup	198.9		
Steak	128.7		
Lamb chops	111.5		
Cream potatoes	104.0		
Sweet potatoes	88.9		
Beans	123.1		
Cucumbers	131.8		
Custard	128.8		
Apple pie	118.2		
Bread	533.4		
Butter	126.9		
SUBPERIOD XI.			
September 2, 1908.			
Soup	147.1		
Steak	45.1		
Bacon	38.8		
Potatoes	83.0		
Boiled onions	71.3		
Corn fritters	246.0		
Apple pie	95.1		
Apple sauce	101.8		
Doughnuts	123.6		
Pears	175.0		
Milk	220.0		
Cocoa	162.9		
Bread	33.8		
Butter	29.7		
Peach	75.0		
September 3, 1908.			
Soup	278.7		
Veal cutlets	56.1		
Gravy	24.9		
Bacon	15.0		
Fried eggs	89.3		
Mashed potatoes	130.4		
Lettuce	33.6		
Force	38.2		

Subject II H.

Date and kind of food	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XI—Con.			
September 3, 1908—Con.	*Grams.*		*Grams.*
Ice cream	64.6		
Stewed plums	231.8		
Milk	440.0		
Bread	287.2		
Butter	128.6		
Sugar	50.0		
September 4, 1908.			
Soup	286.7		
Broiled bluefish	73.0		
Steak	105.8		
Mashed potatoes	147.1		
Boiled potatoes	142.7		
String beans	60.8		
Lettuce	26.8		
Chocolate éclair	70.9		
Cake	22.8		
Peaches	108.4		
Sliced orange	146.8		
Milk	440.0		
Bread	235.7		
Butter	109.5		
September 5, 1908.			
Soup	206.6		
Fowl	84.3		
Lamb	153.9		
Mashed potatoes	121.1		
Gravy	29.7		
Beets	98.6		
Lettuce	83.2		
Milk	440.0		
Bread	319.6		
Butter	93.5		
September 6, 1908.			
Ham	159.9		
Fried eggs	100.9		
Force	26.9		
Peaches	233.2		
Pears	60.0		
Chocolate cake	200.9		
Bread	284.8		
Milk	1,100.0		
September 7, 1908.			
Soup	203.4		
Veal cutlets	112.8		
Gravy	20.2		
Bologna	108.0		
Mashed potatoes	161.2		
Macaroni	160.0		
Apple pie	136.7		
Milk	220.0		
Peaches	115.6		
Pears	100.0		
Bread	391.0		
Butter	87.3		
September 8, 1908.			
Soup	231.3		
Steak	162.3		
Bologna	75.6		
Boiled eggs	80.3		
Mashed potatoes	114.2		
Turnips	94.2		
Beets	101.8		

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XI—Con.			
September 8, 1908—Con.	*Grams.*		*Grams.*
Cheese	30.0		
Pears	80.0		
Orange	104.7		
Force	19.6		
Cup custard	66.6		
Peaches	72.1		
Cake	23.9		
Milk	440.0		
SUBPERIOD XII.			
September 9, 1908.			
Soup	201.4		
Roast lamb	77.6		
Gravy	15.7		
Mashed potatoes	128.2		
String beans	67.0		
French fried potatoes	110.9		
Chocolate éclair	34.2		
Oatmeal	206.5		
Lettuce	53.6		
Grapes	55.2		
Peaches	101.9		
Cake	16.0		
Milk	660.0		
Bread	183.7		
Butter	85.6		
Orange	121.9		
Fried eggs	91.5		
September 10, 1908.			
Soup	256.6		
Steak	153.4		
Fried ham	49.9		
Mashed potatoes	117.3		
Cream potatoes	129.2		
Creamed carrots	107.0		
Apple fritters	80.2		
Lettuce	42.0		
Tapioca pudding	141.5		
Oatmeal	174.9		
Sliced orange	108.5		
Milk	440.0		
Bread	237.0		
Butter	108.5		
September 11, 1908.			
Soup	209.1		
Halibut	149.4		
Lamb chops	45.2		
Fried eggs	39.0		
Cream potatoes	95.3		
Sweet potatoes	118.7		
Spinach	80.0		
Lettuce	45.6		
Chocolate éclair	67.1		
Oatmeal	232.1		
Orange	127.3		
Apple sauce	102.4		
Milk	880.0		
Buns	57.7		
Bread	187.0		
Butter	65.2		
Sugar	204.3		
September 12, 1908.			
Soup	195.4		
Steak	152.0		

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XII—Con.			
September 12, 1908—Continued.	*Grams.*		*Grams.*
Bologna	117.6		
Salmon	48.8		
Mashed potatoes	123.4		
Creamed turnips	99.0		
Lettuce	60.5		
Pie	152.2		
Peaches	300.0		
Bread	270.9		
Butter	62.4		
September 13, 1908.			
Soup	271.9		
Roast beef	120.0		
Gravy	18.9		
Boiled potatoes	159.5		
String beans	65.6		
Ice cream	386.9		
Cake	32.5		
Pear	75.0		
Milk	220.0		
Bread	145.0		
Butter	57.4		
September 14, 1908.			
Soup	233.7		
Lamb chops	64.2		
Bacon	26.4		
Fried potatoes	65.3		
Boiled eggs	84.4		
Mashed potatoes	92.3		
Gravy	10.4		
Onions	76.1		
Lettuce	21.3		
Chocolate cake	61.1		
Apple pie	143.7		
Cereal	175.8		
Sliced orange	72.0		
Milk	440.0		
Coffee	143.9		
Bread	335.5		
Butter	43.2		
September 15, 1908.			
Soup	204.5		
Chicken	79.1		
Gravy	28.8		
Pork chops	132.7		
Fried potatoes	53.6		
Mashed potatoes	136.2		
Rice	212.1		
Beets	97.2		
Peach pie	181.0		
Apple sauce	140.8		
Cake	81.6		
Baked apple	122.7		
Cereal	229.0		
Milk	660.0		
Bread	154.3		
Butter	73.0		
SUBPERIOD XIII.			
September 16, 1908.			
Soup	195.5		
Roast lamb	85.2		
Clam broth	62.3		
Clams	31.6		

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIII—Continued,			
September 16, 1908—Con.	*Grams.*		*Grams.*
Boiled ham	59.0		
Fried eggs	97.6		
Cream potatoes	119.9		
Sweet potatoes	161.0		
String beans	70.4		
Chocolate éclair	44.9		
Cake	31.2		
Peaches	242.4		
Milk	440.0		
Bread	318.7		
Butter	24.5		
Cereal	211.8		
September 17, 1908.			
Soup	270.2		
Steak	190.0		
Potatoes	152.5		
Peach pie	148.0		
Stewed plums	109.8		
Oatmeal	240.6		
Milk	220.0		
Coffee	103.0		
Bread	186.1		
Butter	78.2		
Sugar	60.0		
September 18, 1908.			
Soup	255.7		
Boiled salmon	135.0		
Fried eggs	90.5		
Mashed potatoes	143.5		
Creamed turnips	108.1		
Cucumbers	83.5		
Chocolate éclair	46.4		
Apple sauce	130.4		
Baked apple	117.4		
Cereal	210.5		
Cheese cake	87.1		
Grapes	78.3		
Milk	440.0		
Bread	236.7		
Butter	38.8		
Coffee	116.0		
September 19, 1908.			
Soup	239.5		
Chicken	177.7		
Gravy	18.0		
Mashed potatoes	189.6		
Onions	47.6		
Cabbage	57.8		
Peach pie	98.4		
Ham	109.4		
Pears	215.5		
Milk	440.0		
Cereal	211.2		
Bread	297.2		
Butter	85.2		
September 20, 1908.			
Soup	210.0		
Roast beef	107.7		
Sweet potatoes	228.1		
Spinach	91.1		
Lettuce	40.7		
Ice cream	214.8		
Drop cake	130.0		
Milk	220.0		

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIII—Continued.			
September 20, 1908—Con.	*Grams.*		*Grams.*
Coffee	113.5		
Bread	86.8		
Butter	49.1		
September 21, 1908.			
Soup	229.4		
Lamb chops	109.3		
Cream oysters	123.7		
Potatoes, mashed	153.5		
Fried onions	64.5		
French fried potatoes	36.5		
Lettuce	48.5		
Apple pie	169.3		
Apple sauce	108.0		
Pear sauce	131.1		
Oatmeal	208.0		
Milk	440.0		
Coffee	118.4		
Bread	244.7		
Butter	94.6		
Cake	86.6		
September 22, 1908.			
Soup	199.9		
Roast lamb	129.5		
Pork chops	88.6		
Creamed potatoes	114.4		
Sweet potatoes	119.2		
Cold slaw	161.1		
Custard	132.9		
Peach pie	89.0		
Stewed plums	109.0		
Wheatena	252.5		
Milk	660.0		
Coffee	160.0		
Bread	176.0		
Butter	74.0		
Sugar	50.0		
SUBPERIOD XIV.			
September 23, 1908.			
Soup	190.9		
Chicken	126.5		
Gravy	103.9		
Beef	93.5		
Boiled potatoes	149.0		
Mashed potatoes	129.7		
Cauliflower	113.1		
Carrots	41.0		
Plum pie	188.0		
Apple sauce	175.8		
Baked apple	107.1		
Pickled beets	98.6		
Cookies	40.4		
Cream of wheat	324.9		
Milk	880.0		
Bread	247.2		
Butter	120.1		
September 24, 1908.			
Soup	200.7		
Steak	168.5		
Fried ham	52.0		
Fried eggs	70.2		
Fried potatoes	53.0		
Mashed potatoes	130.4		
String beans	47.6		

Daily food charts—Continued.

Subject II H.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIV—Continued.			
September 24, 1908—Con.	*Grams.*		*Grams.*
Lettuce	185.8	....	....
Apple fritters	111.7	....	....
Apple sauce	83.5	....	....
Sponge cake	12.0	....	....
Oatmeal	302.7	....	....
Stewed plums	112.7	....	....
Milk	660.0	....	....
Bread	212.5	....	....
Butter	90.2	....	....
Sugar	40.0	....	....
September 25, 1908.			
Soup	202.6	....	....
Halibut	174.2	....	....
Lamb chops	25.0	....	....
Potatoes	84.0	....	....
Sweet potatoes	92.8	....	....
Cheese cake	59.1	....	....
Chocolate éclair	60.0	....	....
Cucumbers	74.5	....	....
Baked apples	112.5	....	....
Hominy	197.7	....	....
Orange	59.1	....	....
Milk	550.0	....	....
Bread	178.0	....	....
Butter	104.0	....	....
SUBPERIOD XV.			
September 29, 1908.			
Soup	200.0	....	....
Veal cutlets	107.5	....	....
Pork chops	102.7	....	....
French fried potatoes	52.4	....	....
Sweet potatoes	97.5	....	....
Creamed carrots	100.0	....	....
Onions	20.0	....	....
Chocolate éclair	73.0	....	....
Apple sauce	149.5	....	....
Cake	40.0	....	....
Olives	18.8	....	....
Milk	660.0	....	....
Coffee	70.0	....	....
Bread	187.7	....	....
Butter	69.4	....	....
Cereal	196.0	....	....
September 30, 1908.			
Soup	198.7	....	....
Roast lamb	66.8	....	....
Beef	76.0	....	....
Gravy	74.5	....	....
Mashed potatoes	178.3	....	....
Boiled potatoes	55.0	....	....
String beans	93.0	....	....
Cream puff	55.2	....	....
Oatmeal	205.1	....	....
Cake	37.9	....	....
Peaches	98.2	....	....
Plums	131.0	....	....
Bread	228.0	....	....
Butter	166.0	....	....
Milk	880.0	....	....
Sugar	40.0	....	....
October 1, 1908.			
Soup	184.0	....	....
Steak	140.5	....	....

Subject II H.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XV—Continued.			
October 1, 1908—Con.	*Grams.*		*Grams.*
Boiled ham	35.5	....	....
Boiled egg	94.1	....	....
Mashed potatoes	114.5	....	....
French fried potatoes	38.3	....	....
Fried onions	106.9	....	....
Lettuce	55.5	....	....
Ice cream	72.5	....	....
Apple sauce	156.5	....	....
Cereal	211.5	....	....
Cantaloupe	40.0	....	....
Coffee	80.5	....	....
Milk	440.0	....	....
Bread	250.0	....	....
Butter	134.5	....	....
Orange	122.5	....	....
SUBPERIOD XVI.			
October 2, 1908.			
Soup	235.0	....	....
Baked bluefish	74.0	....	....
Corn beef	86.5	....	....
Mashed potatoes	293.5	....	....
Cabbage	163.5	....	....
Oyster plant	91.0	....	....
Apple dumpling	149.0	....	....
Cookies	41.0	....	....
Peaches	75.0	....	....
Orange	90.0	....	....
Cereal	175.0	....	....
Milk	660.0	....	....
Bread	290.0	....	....
Butter	116.0	....	....
Coffee	86.5	....	....
Celery	30.0	....	....
October 3, 1908.			
Soup	184.0	....	....
Ham	94.0	....	....
Veal chops	98.3	....	....
Mashed potatoes	139.5	....	....
Gravy	37.0	....	....
Lettuce	87.0	....	....
Cauliflower	190.0	....	....
Apple pie	131.5	....	....
Oatmeal	256.5	....	....
Cheese	46.0	....	....
Peaches	75.0	....	....
Milk	440.0	....	....
Coffee	65.0	....	....
Bread	320.5	....	....
Butter	95.5	....	....
Sugar	40.0	....	....
Orange	129.8	....	....
October 4, 1908.			
Soup	159.2	....	....
Roast beef	120.9	....	....
Mashed potatoes	88.9	....	....
Sweet potatoes	120.0	....	....
Ice cream	144.0	....	....
Cake	36.5	....	....
Milk	220.0	....	....
Bread	78.0	....	....
Butter	90.5	....	....
October 5, 1908.			
Soup	208.5	....	....
Roast lamb	159.5	....	....

Daily food charts—Continued.

Subject II H.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVI—Continued.			
October 5, 1908—Con.	*Grams.*		*Grams.*
Gravy	22.0		
Fried eggs	102.5		
Creamed potatoes	121.5		
Sweet potatoes	177.5		
Creamed turnips	104.8		
Lettuce	113.5		
Boiled eggs	91.5		
Chocolate éclair	64.3		
Apple sauce	64.5		
Chocolate cake	84.0		
Milk	440.0		
Bread	237.5		
Butter	114.8		
Coffee	97.5		
October 6, 1908.			
Soup	170.5		
Lamb chops	50.5		
Pork chops	91.0		
Potatoes	155.0		
Carrots	76.5		
Gravy	20.0		
Peach pie	92.5		
Jelly	27.5		
Oatmeal	169.8		
Peaches	80.7		
Grapes	95.0		
Plums	135.5		
Milk	710.0		
Coffee	71.5		
Bread	248.0		
Butter	127.5		
SUBPERIOD XVII.			
October 7, 1908.			
Soup	158.5		
Veal cutlets	84.0		
Gravy	65.0		
Mashed potatoes	113.0		
Pot roast	171.0		
Rice	91.0		
Lettuce	30.0		
Horse-radish	5.0		
Custard	126.5		
Cake	42.5		
Oatmeal	160.0		
Orange	100.0		
Grapes	300.0		
Milk	660.0		
Bread	170.0		
Butter	95.5		
October 8, 1908.			
Soup	187.5		
Roast lamb	89.0		
Bacon	31.7		
Eggs	97.5		
Mashed potatoes	79.0		
French fried potatoes	91.0		
Cauliflower	79.5		
Chocolate éclair	68.0		
Apple pie	147.0		
Lettuce	50.3		
Cereal	131.5		
Grapes	100.0		
Milk	660.0		
Bread	262.0		
Butter	103.5		

Subject II H.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVII—Continued.			
October 9, 1908.	*Grams.*		*Grams.*
Soup	248.3		
Lamb chops	99.0		
Codfish	81.0		
Mashed potatoes	125.5		
Sweet potatos	131.0		
String beans	62.5		
Lettuce	48.5		
Blanc mange	63.8		
Cup cake	43.5		
Wheatena	171.5		
Grapes	165.0		
Plums	142.2		
Milk	490.0		
Bread	140.5		
Butter	55.5		
October 10, 1908.			
Soup	192.0		
Roast pork	80.2		
Gravy	33.5		
Steak	39.5		
Potatoes, boiled	155.0		
Fried potatoes	64.0		
Onions	74.0		
Turnips	183.0		
Apple sauce	104.2		
Cake	75.0		
Cream of wheat	134.5		
Banana	65.0		
Orange	98.3		
Stewed plums	125.5		
Milk	710.0		
Bread	247.5		
Butter	119.0		
Sugar	40.0		
Coffee	70.0		
October 11, 1908.			
Soup	143.7		
Roast beef	345.8		
Mashed potatoes	87.2		
Carrots	50.8		
Celery	34.0		
Beets	88.0		
Ice cream	150.0		
Cake	21.5		
Peaches	150.0		
Milk	270.0		
Bread	94.5		
Butter	101.1		
SUBPERIOD XVIII.			
October 12, 1908.			
Soup	128.2		
Roast lamb	102.1		
Gravy	20.0		
Fried eggs	91.7		
Sweet potatoes	132.4		
Cauliflower	123.2		
Apple sauce	100.5		
Cooky	23.0		
Baked apple	106.4		
Cereal	152.5		
Chocolate éclair	61.5		
Milk	590.0		
Coffee	212.0		
Bread	333.9		
Butter	112.9		

Daily food charts—Continued.

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVIII—Continued.			
October 13, 1908.	*Grams.*		*Grams.*
Soup	215.4		
Veal cutlets	111.3		
Lamb chops	119.3		
Mashed potatoes	136.7		
French fried potatoes	62.7		
Cream turnips	117.9		
Gravy	35.5		
Lettuce	45.9		
Oatmeal	184.0		
Banana	91.5		
Grapes	127.2		
Chocolate pudding	159.7		
Cake	62.0		
Milk	440.0		
Coffee	196.8		
Bread	178.2		
Butter	86.6		

Subject II H.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVIII—Continued.			
October 14, 1908.	*Grams.*		*Grams.*
Soup	184.7		
Steak	157.9		
Mashed potato	192.6		
Onions	83.5		
Sponge cake	79.2		
Cream of wheat	244.0		
Grape fruit	81.8		
Grapes	50.0		
Bacon	26.0		
Eggs	89.8		
Milk	440.0		
Coffee	241.5		
Bread	174.7		
Butter	97.6		
Sugar	50.0		

Subject III O.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II.			
June 18, 1908.	*Grams.*		*Grams.*
Eggs	100.0		
Cornbeef	155.5		
Cabbage	124.4		
Bread	169.5		
Butter	22.5		
Tea	400.0		
Milk	90.0		
Sugar	36.0		
(Lunch and dinner.)			
June 19, 1908.			
Eggs	200.0		
Bread	82.2		
Rolls	152.5		
Lettuce	85.5		
Coffee	400.0		
Tea	400.0		
Sugar	72.0		
Milk	254.0		
Butter	45.0		
Fish	81.5		
June 20, 1908.			
Hash	120.0		
Beef	155.0		
Bread	42.0		
Rolls	145.0		
Spinach	160.0		
Coffee	400.0		
Tea	400.0		
Milk	342.0		
Sugar	54.0		
Butter	33.0		
June 21, 1908.			
Eggs	50.0		
Bacon	40.0		
Ham	100.0		
Beef	100.0		
Cabbage	120.0		
Potatoes	200.0		
Bread	60.5		

Subject III O.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II—Con.			
June 21, 1908—Con.	*Grams.*		*Grams.*
Butter	50.0		
Melon	160.0		
Tea	600.0		
Milk	150.0		
Sugar	72.0		
June 22, 1908.			
Rolls	261.0		
Beef	280.0		
Potatoes	120.0		
Cauliflower	160.0		
Tea	400.0		
Sugar	36.0		
Milk	100.0		
Butter	54.0		
June 23, 1908.			
Eggs	100.0		
Beef	280.0		
Fried potatoes	140.0		
Coffee	400.0		
Tea	350.0		
Bread	27.5		
Rolls	205.0		
Butter	108.0		
Milk	275.0		
Sugar	72.0		
June 24, 1908.			
Eggs	100.0		
Beef	240.0		
Salad	100.0		
Radishes	60.0		
Bread cake	60.0		
Bread	35.0		
Rolls	201.0		
Coffee	400.0		
Tea	200.0		
Milk	150.0		
Sugar	54.0		
Butter	17.0		

Daily food charts—Continued.

Subject III O.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II—Con.			
June 25, 1908.	*Grams.*		*Grams.*
Eggs	100.0		
Beef	340.0		
Cabbage	120.0		
Potatoes	100.0		
Bread	30.0		
Butter	38.0		
Coffee	400.0		
Tea	200.0		
Milk	150.0		
Sugar	54.0		
June 26, 1908.			
Eggs	100.0		
Bread	45.0		
Coffee	400.0		
Milk	100.0		
Butter	7.0		
Sugar	36.0		
(Breakfast.)			
SUBPERIOD VII.			
July 31, 1908.			
Eggs	250.0		
Fish	180.0		
Bread	92.0		
Butter	51.0		
Rolls	208.0		
Coffee	400.0		
Tea	400.0		
Milk	550.0		
Sugar	54.0		
August 1, 1908.			
Eggs	250.0		
Beef	160.0		
Bread	74.0		
Rolls	210.0		
Butter	53.0		
Coffee	400.0		
Milk	1,000.0		
Sugar	54.0		
Tea	200.0		
August 2, 1908			
Eggs	100.0		
Beef	260.0		
Potatoes	113.5		
Tomatoes	131.0		
Beans	89.0		
Rhubarb	49.0		
Cake	40.0		
Bread	105.0		
Coffee	400.0		
Tea	400.0		
Milk	200.0		
Sugar	54.0		
August 3, 1908.			
Eggs	100.0		
Beef	280.0		
Cucumbers	40.0		
Coffee	400.0		
Tea	400.0		
Milk	200.0		
Sugar	54.0		
Butter	119.0		
Bread	69.0		
Rolls	220.0		

Subject III O.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VII—Continued.			
August 4, 1908.	*Grams.*		*Grams.*
Eggs	100.0		
Beef	260.0		
Coffee	400.0		
Tea	800.0		
Milk	550.0		
Sugar	54.0		
Bread	78.0		
Rolls	210.0		
August 5, 1908.			
Eggs	100.0		
Beef	248.0		
Coffee	400.0		
Tea	800.0		
Milk	550.0		
Sugar	54.0		
Bread	81.0		
Rolls	210.0		
Butter	110.0		
August 6, 1908.			
Eggs	100.0		
Beef	280.0		
Bread	67.0		
Rolls	215.0		
Coffee	400.0		
Tea	800.0		
Milk	550.0		
Potatoes	120.0		
Sugar	54.0		
Butter	57.0		
SUBPERIOD X.			
August 21, 1908.			
Eggs	250.0		
Fish	192.2		
Tomatoes	120.0		
Rhubarb	120.0		
Bread	83.0		
Peaches	32.0		
Rolls	214.0		
Coffee	400.0		
Tea	800.0		
Milk	600.0		
Sugar	54.0		
Butter	56.0		
August 22, 1908.			
Eggs	250.0		
Beef	120.0		
Tomatoes	120.0		
Peaches	32.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	73.0		
Rolls	205.0		
August 23, 1908.			
Eggs	100.0		
Ham	120.0		
Cabbage	100.0		
Potatoes	100.0		
Tomatoes	160.0		
Cake	28.0		
Rhubarb	284.0		
Coffee	400.0		

Daily food charts—Continued.

Subject III O.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD X—Continued.			
August 23, 1908—Con.	*Grams.*		*Grams.*
Tea	400.0		
Milk	100.0		
Sugar	54.0		
Butter	76.0		
August 24, 1908.			
Eggs	100.0		
Beef	300.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	96.0		
Rolls	209.0		
Butter	50.0		
August 25, 1908.			
Beef	160.0		
Corned beef	120.0		
Potatoes	100.0		
Cabbage	100.0		
Tomatoes	80.0		
Apple sauce	160.0		
Rolls	202.		
Tea	500.0		
Milk	500.0		
Sugar	18.0		
Butter	52.0		
August 26, 1908.			
Eggs	100.0		
Meat	300.0		
Tomatoes	120.0		
Coffee	400.0		
Bread	60.0		
Tea	550.0		
Milk	550.0		
Sugar	54.0		
Butter	50.0		
August 27, 1908.			
Eggs	250.0		
Omelet	152.0		
Bacon	60.0		
Tomatoes	100.0		
Apple sauce	200.0		
Coffee	400.0		
Tea	300.0		
Milk	550.0		
Sugar	36.0		
Butter	68.0		
SUBPERIOD XIII.			
September 16, 1908.			
Eggs	100.0		
Beef	232.0		
Tomatoes	104.0		
Salad	48.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	67.0		

Subject III O.			
Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIII—Continued.			
September 16, 1908.	*Grams.*		*Grams.*
Butter	97.0		
Buttered rolls	196.0		
September 17, 1908.			
Eggs	100.0		
Beef	204.0		
Potatoes	100.0		
Rhubarb	240.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	61.0		
Rolls	205.0		
September 18, 1908.			
Eggs	250.0		
Fish	160.0		
Tomatoes	100.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	28.0		
Rolls	205.0		
September 19, 1908.			
Eggs	100.0		
Beef	240.0		
Tomatoes	100.0		
Doughnuts	40.0		
Coffee	400.0		
Tea	500.0		
Sugar	54.0		
Milk	600.0		
Butter	55.0		
Bread	30.0		
Rolls	210.0		
September 20, 1908.			
Eggs	100.0		
Beef	260.0		
Sauce	20.0		
Potatoes	200.0		
Beans	100.0		
Rhubarb	140.0		
Rice pudding	208.8		
Coffee	400.0		
Tea	400.0		
Milk	200.0		
Sugar	72.0		
Bread	64.0		
September 21, 1908.			
Eggs	100.0		
Meat	232.0		
Tomatoes	100.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	30.0		
Rolls	219.0		

Daily food charts—Continued.

Subject III O.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIII—Continued.			
September 22, 1908.	*Grams.*		*Grams.*
Eggs	100.0		
Beef	200.0		
Tomatoes	100.0		
Rhubarb	120.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	73.0		
Rolls	219.0		
SUBPERIOD XV.			
September 29, 1908.			
Eggs	100.0		
Ham	104.0		
Beef	200.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	71.0		
Rolls	212.0		
September 30, 1908.			
Eggs	100.0		
Ham	104.0		
Beef	120.0		
Turnips	120.0		
Soup	136.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	31.0		
Rolls	212.0		
Butter	90.0		
October 1, 1908.			
Eggs	100.0		
Beef	328.0		
Tomatoes	120.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	72.0		
Rolls	200.0		

Subject III O.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVII.			
October 7, 1908.	*Grams.*		*Grams.*
Soup	173.0		
Meat	132.0		
Tomatoes	139.0		
Tea	200.0		
Milk	50.0		
Sugar	18.0		
October 8, 1908.			
Beef	397.5		
Apple fritters	120.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	64.0		
Rolls	205.0		
October 9, 1908.			
Eggs	100.0		
Fish	292.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	70.0		
Rolls	203.0		
October 10, 1908.			
Eggs	100.0		
Ham	80.0		
Beef	96.0		
Salad	80.0		
Coffee	400.0		
Tea	500.0		
Milk	600.0		
Sugar	54.0		
Bread	77.0		
Rolls	207.0		
October 11, 1908.			
Eggs	100.0		
Beef	260.0		
Potatoes	200.0		
Cabbage	100.0		
Rice	120.0		
Beans	100.0		
Coffee	400.0		
Tea	600.0		
Milk	200.0		
Sugar	72.0		
Bread	68.0		
Butter for period	169.0		

Subject IV L.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II.			
June 22, 1908.	*Grams.*		*Grams.*
Bread	118.0		
Butter	18.0		
Lamb chops	120.0		
Potatoes	110.0		
Spinach	100.0		
Grape jelly	13.0		
Milk	460.0		
Pickled beets	46.0		

Subject IV L.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II—Con.			
June 22, 1908—Cont'd.	*Grams.*		*Grams.*
Bananas	100.0		
Cookies	49.0		
June 23, 1908.			
Bread	110.0		
Butter	37.0		
Milk	720.0		

Daily food charts—Continued.

Subject IV L. Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II—Con.			
June 23, 1908—Cont'd.	*Grams.*		*Grams.*
Blackberries	115.0	....	....
Fried eggs	85.0	....	....
French toast	264.0	....	....
Strawberries	185.0	....	....
Steak	106.0	....	....
Potatoes	106.0	....	....
Lady fingers	28.0	....	....
June 24, 1908.			
Bread	126.0	....	....
Butter	37.0	....	....
Milk	690.0	....	....
Orange	193.0	....	....
Fried eggs	190.0	....	....
Steak	108.0	....	....
Fried potatoes	76.0	....	....
Pork chops	66.0	....	....
Potato (boiled)	45.0	....	....
Pickled beets	45.0	....	....
Green peas	45.0	....	....
Tomatoes	66.0	....	....
Strawberries	140.0	....	....
Chocolate cake	40.0	....	....
June 25, 1908.			
Bread	47.0	....	....
Butter	31.0	....	....
Milk	580.0	....	....
Fried eggs	107.0	....	....
Bananas	100.0	....	....
Steak	94.0	....	....
Beets	50.0	....	....
Radishes	48.0	....	....
Fried potatoes	50.0	....	....
Baked sweet potatoes	180.0	....	....
Breaded veal	187.0	....	....
String beans	60.0	....	....
Cake	43.0	....	....
June 26, 1908.			
Bread	131.0	....	....
Butter	20.0	....	....
Milk	920.0	....	....
Orange	189.0	....	....
Fried eggs	98.0	....	....
Fried sweet potatoes	67.0	....	....
Pork chops	82.0	....	....
Soft shell crab	126.0	....	....
Tomatoes	129.0	....	....
Cake	69.0	....	....
June 27, 1908.			
Bread	163.0	....	....
Butter	12.0	....	....
Milk	690.0	....	....
Muskmelon	38.0	....	....
Eggs	99.0	....	....
Soup	690.0	....	....
Soup meat	59.0	....	....
Cookies	43.0	....	....
Steak	53.0	....	....
String beans	10.0	....	....
June 28, 1908.			
Bread	116.0	....	....
Butter	20.0	....	....
Milk	700.0	....	....
Muskmelon	49.0	....	....
Boiled eggs	102.0	....	....
Meat	83.0	....	....
Soup	230.0	....	....
Banana	100.0	....	....

Subject IV L. Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD II—Con.			
June 29, 1908.	*Grams.*		*Grams.*
Bread	88.0	....	....
Butter	10.0	....	....
Milk	230.0	....	....
Eggs	98.0	....	....
Fried potatoes	20.0	....	....
Roast beef	40.0	....	....
Radishes	5.0	....	....
Strawberries	20.0	....	....
Jelly	2.0	....	....
SUBPERIOD VII.			
July 31, 1908.			
Bread	187.5	....	....
Butter	32.0	....	....
Milk	220.0	....	....
Lettuce	27.5	....	....
Clam broth	71.8	....	....
Clams	20.0	....	....
Roast beef	88.0	....	....
Mashed potatoes	97.8	....	....
Fried potatoes	110.0	....	....
Green peas	57.5	....	....
Gravy	10.7	....	....
Plums	20.0	....	....
Tomatoes	87.5	....	....
Ham	20.0	....	....
Peaches	60.0	....	....
Cake	21.8	....	....
Cookies	43.1	....	....
August 1, 1908.			
Bread	379.6	....	....
Butter	21.6	....	....
Corn flakes	10.0	....	....
Milk	1,540.0	....	....
Sugar	104.3	....	....
Grape-fruit	5.0	....	....
Soup	171.2	....	....
Cucumbers	59.5	....	....
Veal cutlets	87.5	....	....
Rice	71.5	....	....
Mashed potatoes	80.0	....	....
Gravy	34.2	....	....
Ham	115.2	....	....
Cheese	73.3	....	....
August 3, 1908.			
Bread	135.0	....	....
Butter	55.9	....	....
Milk	660.0	....	....
Sugar	37.0	....	....
Watermelon	330.5	....	....
Shredded wheat	59.0	....	....
Olives	20.9	....	....
Soup	149.6	....	....
Fried onions	38.5	....	....
Steak	82.0	....	....
Fried potatoes	110.0	....	....
Fried macaroni	84.0	....	....
Huckleberry pie	75.5	....	....
Corned-beef hash	78.0	....	....
Poached eggs	91.1	....	....
August 4, 1908.			
Bread	133.2	....	....
Butter	25.2	....	....
Watermelon	223.5	....	....
Shredded wheat	39.2	....	....
Milk	660.0	....	....
Soup	204.9	....	....
Chicken	48.6	....	....
Mashed potatoes	107.8	....	....

Daily food charts—Continued.

Subject IV L.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD VII—Continued.			
August 4, 1908—Con.	*Grams.*		*Grams.*
Fried potatoes	102.8		
Pork	20.3		
String beans	50.7		
Gravy	23.4		
Stewed plums	94.4		
Cookies	51.5		
Bologna	50.0		
Cheese	100.0		
Pineapple	167.6		
Cake	60.0		
August 5, 1908.			
Bread	171.1		
Butter	65.5		
Milk	660.0		
Sugar	28.1		
Corn flakes	23.8		
Muskmelon	203.2		
Soup	196.6		
Cucumbers	79.5		
Lamb	133.1		
Potatoes	200.3		
Gravy	21.0		
Ham	45.0		
Corn	108.2		
Peas	122.5		
Cookies	55.0		
Cake	20.5		
August 6, 1908.			
Bread	259.9		
Butter	48.9		
Milk	660.0		
Sugar	58.2		
Force	30.0		
Muskmelon	163.1		
Soup	196.0		
Roast beef	138.2		
Mashed potatoes	105.8		
Peas	51.9		
Ham	27.4		
Gravy	8.2		
Cookies	44.3		
Orange	133.7		
Pears	281.5		
Cheese	15.9		
August 7, 1908.			
Bread	69.4		
Butter	21.4		
Milk	440.0		
Muskmelon	171.9		
SUBPERIOD X.			
August 21, 1908.			
Bread	156.8		
Butter	44.5		
Milk	880.0		
Sugar	97.0		
Peaches	98.3		
Shredded wheat	62.0		
Soup	210.5		
Baked bluefish	82.0		
Potatoes	113.1		
Potato salad	112.1		
Beans	50.4		
Bologna	72.2		
Rice pudding	79.7		

Subject IV L.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD X—Con.			
August 21, 1908—Con.	*Grams.*		*Grams.*
Chocolate éclair	48.6		
Pineapple	97.2		
August 22, 1908.			
Bread	113.7		
Butter	35.0		
Sugar	118.8		
Milk	660.0		
Shredded wheat	62.5		
Orange	105.2		
Soup	196.8		
Lettuce	23.5		
Steak (sirloin)	116.5		
Squash	100.5		
Mashed potatoes	107.5		
Plums	43.8		
Apple pie	113.6		
August 23, 1908.			
Bread	210.0		
Ham	42.8		
Bologna	115.5		
Grapes	123.9		
Cheese	47.8		
August 24, 1908.			
Bread	165.2		
Butter	34.4		
Milk	880.0		
Peaches	124.0		
Shredded wheat	62.6		
Soup	155.0		
Veal cutlets	71.9		
Gravy	21.9		
Mashed potatoes	90.3		
Sweet potatoes	75.7		
Onions	74.0		
Fried ham	46.6		
Scrambled eggs	57.5		
Peach pie	41.3		
Cake	40.3		
August 25, 1908.			
Bread	148.3		
Butter	38.5		
Milk	660.0		
Cantaloupe	145.8		
Shredded wheat	65.5		
Soup	166.4		
Cucumbers	72.0		
Chicken	90.9		
Beans	55.2		
Mashed potatoes	192.8		
Gravy	27.7		
Neapolitan	52.1		
Stewed pears	105.4		
Macaroni	127.5		
Lamb chops	85.4		
Cake	36.7		
August 26, 1908.			
Bread	123.0		
Butter	48.2		
Milk	880.0		
Shredded wheat	62.7		
Peaches	134.0		
Soup	186.3		
Roast lamb	79.5		
Baked potatoes	81.7		
Fried potatoes	62.4		

Daily food charts—Continued.

Subject IV L.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD X—Con.			
August 26, 1908—Con.	*Grams.*		*Grams.*
Corn	121.1		
Beets	69.9		
Gravy	23.3		
Apple tart	46.5		
Bologna	100.5		
Boiled eggs	86.3		
Orange	126.5		
Sugar	70.4		
Cake	21.0		
August 27, 1908.			
Bread	126.6		
Butter	50.0		
Shredded wheat	65.0		
Milk	880.0		
Orange	118.6		
Soup	200.0		
Cucumbers	124.4		
Steak	118.7		
Sweet potatoes	101.3		
Creamed potatoes	86.1		
Lima beans	102.5		
Gravy	9.7		
Custard	149.5		
Lamb chops	83.8		
Apple pie	129.3		
SUBPERIOD XIII.			
September 16, 1908.			
Bread	146.5		
Butter	42.4		
Milk	885.0		
Wheatena	170.6		
Peaches	225.7		
Soup	157.5		
Lettuce	34.9		
Meat	98.5		
Fried ham	50.9		
Sweet potatoes	86.3		
Creamed potatoes	114.7		
String beans	81.8		
Gravy	26.4		
Clams	83.5		
Fried eggs	70.0		
Eclairs	67.4		
Cake	18.7		
September 17, 1908.			
Bread	146.0		
Butter	42.0		
Milk	660.0		
Oatmeal	198.6		
Cantaloupe	86.8		
Tomatoes	83.9		
Soup	209.4		
Meat	127.6		
Fried onions	5.1		
Mashed potatoes	125.4		
Fried potatoes	102.4		
Cream puff	131.2		
Fried eggs	51.6		
Fried bacon	18.3		
Peach pudding	26.5		
September 18, 1908.			
Bread	193.3		
Butter	18.4		
Cream of wheat	156.5		
Baked apple	119.0		

Subject IV L.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIII—Continued.			
September 18, 1908—Con.	*Grams.*		*Grams.*
Milk	1,100.0		
Cucumbers	68.4		
Clam chowder	232.0		
Salmon	149.2		
Potatoes	87.8		
Turnip	33.2		
Eclair	53.1		
Grapes	86.0		
September 19, 1908.			
Bread	188.2		
Butter	39.7		
Wheatena	176.5		
Milk	440.0		
Plums	102.1		
Grapes	50.3		
Pie	85.1		
Soup	203.6		
Chicken	102.4		
Mashed potatoes	62.2		
Gravy	22.0		
Peas	96.5		
Ham	56.3		
September 20, 1908.			
Bread	48.7		
Butter	43.3		
Milk	440.0		
Roast beef	79.6		
Soup	200.0		
Lettuce	42.5		
Sweet potatoes	164.8		
Spinach	80.2		
Ice cream	83.8		
Drop cake	43.1		
September 21, 1908.			
Bread	153.9		
Butter	44.2		
Milk	880.0		
Oatmeal	174.2		
Stewed pears	107.7		
Lettuce	62.7		
Soup	201.6		
Pork chops	101.6		
Mashed potatoes	126.5		
Fried potatoes	52.9		
Onions	94.4		
Gravy	8.9		
Apple pie	151.2		
Apple sauce	116.7		
Creamed oysters	103.1		
Cake	56.0		
September 22, 1908.			
Bread	82.3		
Butter	42.6		
Milk	880.0		
Wheatena	232.3		
Stewed plums	207.3		
Coleslaw	64.5		
Soup	217.9		
Roast beef	114.2		
Sweet potatoes	251.4		
Creamed potatoes	126.1		
Gravy	26.2		
Turnips	69.3		
Custard	159.1		
Coffee	160.8		

Daily food charts—Continued.

Subject IV L.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XIII—Continued.			
September 22, 1908—Con.	*Grams.*		*Grams.*
Pork chops	75.1		
Peach pie	89.6		
SUBPERIOD XV.			
September 29, 1908.			
Bread	152.2		
Butter	56.2		
Milk	880.0		
Wheatena	224.0		
Muskmelon	167.0		
Soup	195.6		
Veal	82.8		
Sweet potatoes	99.7		
Fried potatoes	127.5		
Carrots	68.8		
Gravy	31.5		
Eclair	74.6		
Pork chops	100.0		
Apple sauce	143.2		
Cake	30.0		
September 30, 1908.			
Bread	162.2		
Butter	43.0		
Oatmeal	174.5		
Milk	1,100.0		
Soup	189.5		
Roast beef	83.0		
Potatoes	215.1		
String beans	91.2		
Gravy	81.3		
Cream puff	57.3		
Meat	97.4		
Carrots	12.7		
Peaches	112.4		
Cake	37.0		
October 1, 1908.			
Bread	144.3		
Butter	18.7		
Milk	880.0		
Wheatena	174.3		
Cantaloupe	100.0		
Cake	55.0		
Soup	186.7		
Meat	84.0		
Potatoes	142.5		
Fried potatoes	45.0		
Fried onions	95.5		
Coffee	91.3		
Neapolitan	74.3		
Lettuce	40.0		
Apple sauce	170.0		
Ham	37.4		
Eggs	97.5		
SUBPERIOD XVII.			
October 7, 1908.			
Bread	113.6		
Butter	31.2		
Milk	840.0		
Oatmeal	150.0		
Sugar	108.0		
Soup	185.7		
Veal cutlets	76.0		
Gravy	67.8		
Potatoes	178.6		
Pot roast	71.2		
Rice	79.7		

Subject IV L.

Date and kind of food.	Weight of food.	Per cent nitrogen of food.	Weight nitrogen of food.
SUBPERIOD XVII—Continued.			
October 7, 1908—Con.	*Grams.*		*Grams.*
Cauliflower	63.8		
Custard	146.4		
October 8, 1908.			
Bread	134.5		
Butter	43.0		
Milk	880.0		
Wheatena	127.0		
Grapes	100.0		
Plums	57.0		
Soup	168.5		
Lettuce	106.0		
Roast lamb	64.8		
Mashed potatoes	99.0		
Fried potatoes	58.7		
Gravy	20.0		
Cauliflower	93.3		
Coffee	67.3		
Eclair	70.0		
Fried eggs	87.7		
Fried bacon	33.6		
Apple pie	114.5		
October 9, 1908.			
Bread	36.7		
Butter	31.0		
Milk	880.0		
Wheatena	173.2		
Grapes	240.0		
Codfish	146.5		
Sweet potatoes	125.2		
Cake	38.3		
Stewed plums	141.3		
Ham	70.7		
Banana	152.8		
Drop cake	37.5		
October 10, 1908.			
Bread	100.0		
Butter	50.0		
Milk	880.0		
Stewed plums	120.2		
Cereal	131.9		
Steak	99.8		
Fried onions	58.0		
Sweet potatoes	87.8		
Mashed potatoes	100.0		
Soup	187.5		
Bananas	201.0		
Oranges	171.8		
Cake	103.2		
Roast pork	72.1		
Coffee	81.3		
Gravy	36.7		
Apple sauce	104.0		
October 11, 1908.			
Bread	45.8		
Butter	33.0		
Milk	660.0		
Soup	163.0		
Roast beef	112.5		
Ham	39.5		
Fried eggs	50.6		
Apple sauce	119.0		
Cake	74.6		
Celery	51.5		
Carrots	45.7		
Mashed potatoes	96.8		
Coffee	179.5		
Ice cream	81.5		

SERIES A.

Daily results on urine and feces.

No. I. FORE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
June 15	51.6	922	1.025	10.5	9.05	0.37	0.18	0.15	0.38	0.06	0.46	0.790	0.605	0.036	0.149	0.75	Trace.	6.87	Acid	......	......	......
16	....																			......	......	......
17	....	795	1.029	11.0	9.61	.49	.27	.23	.44	.05	.14	.769	.665	.023	.089	.86	Trace.	10.0	...do.....	130.3	38.7	70.3
18	....																			......	......	......
19	....	927	1.025	10.9	8.82	.46	.21	.18	.43	.06	.92	.805	.665	.023	.117	.92	Trace.	10.8	...do.....	87.9	23.3	73.6
20	....																			161.4	36.7	77.2
21	....	500	1.033	8.22	6.64	.36	.15	.11	.39	.06	.62	.617	.455	.046	.116	.70	10	9.57	...do.....	284.0	50.8	82.1
22	51.6																			104.0	34.9	66.4
23	51.6	....																		174.9	55.3	68.4

BALANCE.

		Grams.
Nitrogen in food		117.6
Nitrogen in excreta:		
Urine	81.2	
Feces	14.2	
		95.4
Balance		+22.2

	Grams.
Ether extract in feces	49.4

Daily results on urine and feces—Continued.

No. II. FORE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
June 23	51.6	575	1.035	9.19	7.94	0.37	0.12	0.10	0.42	0.06	0.28	0.693	0.516	0.050	0.127	0.93	45	6.55	Acid			
24																				131.7	27.5	79.1
25	52	660	1.030	9.23	7.23	.36	.19	.16	.47	.05	.93	.688	.545	.024	.119	.90	45	9.50	do			
26																				83.0	22.9	72.7
27	52.5	730	1.026	8.82	7.54	.37	.16	.14	.41	.05	.31	.640	.488	.025	.127	.77	40	8.51	do	218.0	51.0	76.6
28																				65.0	18.8	71.0
29																				296.0	61.2	73.3
30																				126.6	13.4	89.5

BALANCES.

		Grams.
Nitrogen in food		83.5
Nitrogen in excreta:		
Urine	54.5	
Feces	11.3	
		65.8
Balance		+17.7

	Grams.
Ether extract in food	540.0
Ether extract in feces	34.2
Balance	505.8

No. III. LOW BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 3	53.5																					
4	......	1,010	1.026	8.86	6.94	0.57	0.17	0.14	0.42	0.08	0.68	0.652	0.524	0.034	0.094	0.90	0	7.45	Acid......	110.0	24.5	77.7
5	53.3																			183.0	56.2	69.3
6	52.8	742	1.028	10.0	7.85	.42	.18	.14	.44	.08	1.03	.743	.584	.042	.117	1.02	10	9.25	...do......	135.7	27.9	79.4
7	53.1																			63.7	13.8	78.3
8	53.3	769	1.032	11.8	9.75	.37	.23	.21	.58	.07	.80	.907	.701	.034	.172	1.10	45	9.95	...do......	141.0	36.2	74.3
9	53.2																			174.0	38.7	77.8
10	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	195.6	45.1	77.0

BALANCE.

		Grams.
Nitrogen in food..........		104.5
Nitrogen in excreta:		
Urine..........	70.2	
Feces..........	13.0	
		83.2
Balance..........		+21.3

Daily results on urine and feces—Continued.

No. IV. LOW BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 10	53.5																					
11	53.3	846	1.029	12.3	10.4	0.45	0.23	0.21	0.41	0.09	0.72	0.935	0.733	0.058	0.144	1.02	30	11.0	Acid......	196.5	37.2	81.1
12	......																			158.0	34.2	78.4
13	52.9	590	1.031	10.9	8.37	.73	.20	.17	.42	.07	1.16	.816	.648	.028	.140	.90	0	6.8	...do......	146.5	31.8	78.3
14	......																					
15	52.8	800	1.030	12.6	10.9	.48	.19	.16	.44	.10	.49	.903	.724	.038	.141	.97	50	10.5	...do......	249.1	40.0	84.0
16	52.7																			58.5	9.6	83.6
17	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	186.5	29.4	84.3
18	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	257.7	45.8	82.2

BALANCE.

		Grams.
Nitrogen in food		94.6
Nitrogen in excreta:		
Urine	83.9	
Feces	13.1	
		97.0
Balance		−2.4

No. V. LOW BENZOATE PERIOD. SUBJECT 1 R.

Date	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	c. c.		Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.		Gms.		Gms.	Gms.	P. ct.
July 17	52.7																			......	......	......
18	53.0	720	1.029	10.4	8.65	0.45	0.21	0.18	0.47	0.12	0.50	0.779	0.649	0.032	0.098	0.80	5	10.2	Acid	......	......	......
19	......																			189.0	27.0	85.3
20	53.2	967	1.024	11.6	9.71	.49	.20	.18	.41	.09	.70	.773	.621	.031	.121	.95	5	11.4	do.	253.8	48.4	80.9
21	53.1																			62.0	14.3	76.9
22	53.3	987	1.025	11.3	9.14	.40	.22	.20	.49	.11	.94	.821	.626	.038	.157	1.02	......	11.9	do.	159.2	38.7	75.8
23	53.3																			......	......	......
24	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	288.9	48.7	83.1
25	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	186.0	30.3	83.7

BALANCES.

		Grams.
Nitrogen in food		97.0
Nitrogen in excreta:		
Urine	77.0	
Feces	12.6	
		89.6
Balance		+7.4

	Grams
Ether extract in food	770.0
Ether extract in feces	41.8
Balance	728.2

Daily results on urine and feces—Continued.

No. VI. LOW BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 24	53.4																			......	......	......
25	53.6	853	1.027	10.1	8.40	0.44	0.21	0.19	0.48	0.10	0.47	0.774	0.612	0.046	0.116	0.89	....	11.6	Acid	......	......	......
26	....																			271.7	49.0	82.0
27	....																			......	......	......
28	53.7	775	1.028	9.6	7.86	.71	.20	.18	.44	.11	.28	.739	.571	.050	.118	.79	50	12.2	...do	122.5	28.4	76.8
29	53.6	595	1.027	8.36	6.91	.27	.16	.14	.46	.10	.46	.690	.520	.040	.130	.71	30	7.12	...do	132.2	31.2	76.4
30	....																			145.1	33.6	77.0
31	....	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	162.0	29.1	82.0

BALANCES.

		Grams.
Nitrogen in food		94.2
Nitrogen in excreta:		
Urine	66.2	
Feces	10.3	
		76.5
Balance		+17.7

	Grams.
Ether extract in food	765.0
Ether extract in feces	43.6
Balance	721.4

No. VII. LOW BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 31	53.3																					
Aug. 1	......	793	1.026	9.16	7.58	0.33	0.20	0.16	0.44	0.09	0.52	0.668	0.529	0.031	0.108	0.82	10	8.33	Acid	94.2	16.2	83.1
2	......																					
3	53.1	805	1.028	9.71	7.84	.43	.20	.16	.42	.08	.74	.795	.633	.025	.137	.95	40	11.4	do	150.5	34.9	77.5
4	53.2																			239.0	42.6	82.2
5	53.3	830	1.030	11.3	9.48	.38	.25	.18	.53	.08	.48	.786	.650	.038	.098	1.02	40	11.5	do	181.5	32.1	82.3
6	53.4																			109.0	19.1	82.5
7																				187.2	38.4	79.5

BALANCES.

		Grams.
Nitrogen in food		81.2
Nitrogen in excreta:		
Urine	69.5	
Feces	10.8	
		80.3
Balance		+0.9

	Grams.
Ether extract in food	695.8
Ether extract in feces	37.9
Balance	657.9

Daily results on urine and feces—Continued.

No. VIII. LOW BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 7	53.5																			....	....	....
8	....	900	1.026	11.4	9.22	0.45	0.22	0.20	0.44	0.06	1.01	0.855	0.644	0.046	0.165	0.91	30	8.84	Acid.....	121.8	19.1	84.4
9	....																			175.4	42.3	75.9
10	53.8																			....	....	....
11	53.5	975	1.027	11.3	9.24	.43	.21	.18	.43	.07	.92	.845	.670	.034	.141	.95	....	13.8	...do......	261.5	45.2	82.7
12	53.6																			....	....	....
13	53.6	717	1.029	10.7	9.05	.31	.22	.19	.42	.07	.63	.817	.651	.035	.131	.97	....	9.00	...do.....	333.5	56.0	83.2
14	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	76.5	15.4	80.0

BALANCES.

		Grams.
Nitrogen in food		87.7
Nitrogen in excreta:		
Urine	78.2	
Feces	10.4	
		88.6
Balance		— 0.9

	Grams.
Ether extract in food	685.0
Ether extract in feces	38.8
Balance	646.2

No. IX. LOW BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 14	53.7																			......	......	......
15	53.5	750	1.032	11.6	9.95	0.34	0.22	0.18	0.50	0.10	0.49	0.887	0.750	0.047	0.091	1.36	....	9.35	Acid.....	163.5	34.5	78.9
16	....																			......	......	......
17	53.8	785	1.027	10.2	8.02	.51	.18	.16	.38	.07	1.04	.805	.615	.040	.150	1.00	....	9.95	...do......	229.4	54.0	76.5
18	53.7																			99.0	19.2	80.6
19	53.8	1,015	1.023	11.0	9.20	.33	.22	.19	.47	.10	.68	.784	.632	.036	.114	.98	35	9.35	...do......	......	......	......
20	53.7																			134.0	33.8	74.8
21	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	177.0	47.2	73.3

BALANCES.

		Grams.
Nitrogen in food		*a* 94.6
Nitrogen in excreta:		
Urine	77.2	
Feces	11.2	
		88.4
Balance		+ 6.2

	Grams.
Ether extract in food	872.1
Ether extract in feces	43.0
Balance	829.1

a Calculated proportionally from 5⅓ days' collection of food in which the nitrogen amounted to 72.08 grams.

Daily results on urine and feces—Continued.

No. X. LOW BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 21	54.0																			......	......	......
22	......	1,130	1.022	11.0	8.97	0.33	0.25	0.20	0.44	0.10	0.91	0.786	0.633	0.039	0.114	0.96	35	10.9	Acid......	77.6	15.3	80.3
23	53.9																			......	......	......
24	......	1,140	1.024	14.5	12.1	.57	.28	.21	.54	.11	.90	.992	.793	.059	.140	1.02	35	12.3	...do......	65.0	21.2	66.7
25	53.7																			173.5	42.5	75.5
26	54.0	1,390	1.018	12.3	9.79	.41	.22	.18	.51	.09	1.40	.884	.663	.048	.172	1.02	40	9.21	...do......	173.5	21.9	87.4
27	54.3																			......	......	......
28	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	72.2	12.4	82.8

BALANCES.

		Grams.
Nitrogen in food		101.0
Nitrogen in excreta:		
Urine	86.6	
Feces	6.7	
		93.3
Balance		+ 7.7

	Grams.
Ether extract in food	653.9
Ether extract in feces	25.8
Balance	628.1

No. XI. HIGH BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 2	......	1,180	1.020	12.7	10.6	0.55	0.22	0.20	0.45	0.11	0.77	0.885	0.708	0.037	0.139	0.92	35	12.1	Acid.....	276.3	34.1	87.7
3	......																			131.0	29.8	77.2
4	54.2																			......	......	......
5	54.1	1,216	1.021	12.0	10.2	.67	.24	.21	.36	.10	.43	.896	.740	.038	.118	.97	50	11.7	.do.....	80.9	22.3	72.4
6	......																			124.9	38.9	68.9
7	54.5	1,095	1.024	10.7	9.40	.40	.21	.19	.41	.11	.17	.789	.630	.017	.159	.96	45	11.2	.do.....	112.4	29.4	73.9
8	54.7																			92.2	23.1	75.6
9	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	171.3	24.3	85.8

BALANCES.

		Grams.
Nitrogen in food		104.8
Nitrogen in excreta:		
Urine	82.8	
Feces	11.9	
		94.7
Balance		+ 10.1

	Grams.
Ether extract in food	600.8
Ether extract in feces	41.3
Balance	559.5

Daily results on urine and feces—Continued.

No. XII. HIGH BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 9	54.9	1,225	1.028	15.6	13.3	0.67	0.23	0.20	0.59	0.13	0.68	1.256	1.006	0.044	0.206	1.38	40	16.1	Acid	......	......	......
10	54.8																			......	......	......
11	54.4																			121.0	26.3	78.2
12	....	966	1.024	11.5	9.87	.43	.21	.19	.48	.17	.34	.892	.721	.048	.123	.98	50	9.9	...do	170.1	37.7	77.8
13	....																			......	......	......
14	54.7	1,190	1.024	11.5	9.65	.50	.22	.19	.49	.16	.48	.869	.689	.029	.151	.97	50	14.5	...do	270.0	53.6	80.2
15	54.7																			164.4	34.8	78.8

BALANCES.

		Grams.
Nitrogen in food		96.6
Nitrogen in excreta:		
Urine	88.7	
Feces	9.0	
		97.7
Balance		− 1.1

	Grams.
Ether extract in food	615.9
Ether extract in feces	31.9
Balance	584.0

No. XIII. HIGH BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 16	54.7	1,035	1.022	10.6	8.84	0.36	0.21	0.19	0.38	0.20	0.61	0.841	0.663	0.037	0.141	1.25	50	15.7	Acid	......	......	......
17	54.2																					
18	....																			198.5	47.0	76.3
19	54.2	816	1.030	12.7	10.6	.52	.21	.19	.44	.24	.69	.987	.772	.045	.170	1.15	60	13.3	do	129.0	28.1	78.2
20	....																			262.7	39.8	84.8
21	54.7	1,455	1.019	12.6	10.7	.63	.23	.20	.56	.22	.26	.937	.744	.032	.161	1.24	45	17.8	do	80.5	18.2	77.4
22	....																			106.7	25.1	76.5
23	....	....	....	....	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	147.8	35.4	76.0

BALANCES.

		Grams.
Nitrogen in food		101.8
Nitrogen in excreta:		
Urine	84.5	
Feces	11.6	
		96.1
Balance		+ 5.7

	Grams.
Ether extract in food	682.0
Ether extract in feces	35.8
Balance	646.2

Daily results on urine and feces—Continued.

No. XIV. HIGH BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 23	54.9	1,450	1.019	12.0	10.3	0.48	0.22	0.19	0.60	0.29	0.11	0.876	0.677	0.057	0.142	1.41	50	14.7	Acid	......	......	......
24	55.0																					
25	55.0																			......	......	......
26	....	1,233	1.022	11.8	9.86	.44	.21	.19	.50	.27	.52	.848	.697	.025	.126	1.38	65	14.7	do	149.5	34.4	77.0
27	....																			93.7	24.3	74.2
28	54.9	950	1.020	11.9	9.75	.35	.28	.25	.60	.45	.47	1.033	.825	.055	.153	1.26	40	12.4	do	64.4	22.7	64.9
29	....	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	146.2	42.3	71.1

BALANCES.

		Grams.
Nitrogen in food		99.6
Nitrogen in excreta:		
Urine	71.3	
Feces	7.6	
		78.9
Balance		+20.7

	Grams.
Ether extract in food	690.7
Ether extract in feces	25.4
Balance	665.3

No. XV. HIGH BENZOATE PERIOD. SUBJECT I R.

Date.	Body weight.	Urine.																Feces.			
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 29	55.1	1,280	1.025	16.0	13.4	0.45	0.28	0.22	0.56	0.63	0.73	1.073	0.900	0.040	0.133	1.57	40	16.6	Acid	......	......	......
30	54.9	1,480	1.020	15.6	13.1	.50	.28	.24	.56	.56	.60	1.036	.872	.023	.141	1.41	45	14.8	...do	148.6	23.0	84.5
Oct. 1	55.1	1,560	1.021	14.6	12.2	.46	.25	.21	.53	.62	.54	1.087	.881	.038	.168	1.31	40	11.1	Sl. acid	......	......	......
2	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	184.0	47.7	74.0
3	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	84.6	24.1	70.4

BALANCES.

		Grams.
Nitrogen in food		48.5
Nitrogen in excreta:		
Urine	46.2	
Feces	5.8	
		52.0
Balance		-3.5

	Grams.
Ether extract in food	331.5
Ether extract in feces	24.1
Balance	307.4

Daily results on urine and feces—Continued.

No. XVI. AFTER PERIOD. SUBJECT I R.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 2	....	1,920	1.017	15.3	13.3	0.49	0.37	0.32	0.46	0.15	0.53	1.128	0.901	0.029	0.198	1.46	Trace.	13.2	Acid......	......	......	......
3	55.0	1,015	1.021	11.4	9.75	.45	.22	.17	.43	.09	.46	.829	.661	.034	.134	1.14	Trace.	14.0	...do......	158.1	25.5	83.9
4	....																			......	......	......
5	55.2	1,220	1.022	14.1	12.2	.53	.27	.21	.53	.11	.46	.944	.769	.047	.128	1.33	50	12.1	...do......			
6	55.1																			177.0	54.9	69.0
7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	......	......	......
8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	104.5	32.1	69.4

BALANCES.

		Grams.
Nitrogen in food		77.9
Nitrogen in excreta:		
Urine	66.3	
Feces	6.5	
		72.8
Balance		+ 5.1

	Grams.
Ether extract in food	492.3
Ether extract in feces	26.4
Balance	465.9

No. XVII. AFTER PERIOD. SUBJECT I R.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 7	55.0	1,200	1.021	11.3	9.66	0.34	0.23	0.18	0.53	0.05	0.49	0.784	0.676	0.036	0.072	1.40	65	11.3	Acid	......	......	......
8	....																					
9	55.1																			220.3	40.2	81.7
10	....	1,116	1.022	9.77	8.10	.30	.21	.17	.45	.06	.65	.684	.567	.036	.081	1.28	55	9.6	Sl. acid			
11	....																			233.5	67.5	71.1

BALANCES.

		Grams.
Nitrogen in food		61.2
Nitrogen in excreta:		
Urine	51.9	
Feces	6.7	
		58.6
Balance		+ 2.6

	Grams.
Ether extract in food	545.4
Ether extract in feces	23.9
Balance	521.5

Daily results on urine and feces—Continued.

No. XVIII. AFTER PERIOD. SUBJECT I R.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 12	55.3	1,100	1.027	12.5	10.5	0.38	0.23	0.19	0.47	0.04	0.88	0.850	0.688	0.062	0.100	1.08	40	9.3	Acid	......	......	......
13	55.1																					
14	55.1	1,200	1.025	14.0	11.6	.68	.24	.20	.42	.04	1.01	.727	.569	.045	.113	1.04	65	12.7	...do	130.1	37.5	71.2
15	55.1																					
16	55.2	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	145.5	40.7	72.0
17	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	54.4	16.0	71.6

BALANCES.

		Grams.
Nitrogen in food		61.5
Nitrogen in excreta:		
Urine	53.0	
Feces	5.6	
		58.6
Balance		+2.9

	Grams.
Ether extract in food	403.9
Ether extract in feces	24.3
Balance	379.6

No. I. FORE PERIOD. SUBJECT H H.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
June 16	91	910	1.035	15.6	12.6	0.75	0.36	0.33	0.50	0.09	1.30	1.200	0.955	0.055	0.190	1.29	50	9.75	Acid	.....	.....	.....
17	.....																					
18	.....	995	1.033	16.4	13.4	.81	.33	.29	.49	.08	1.29	1.060	.930	.060	.070	1.03	40	7.47	...do.....	.....	.....	.....
19	.....																					
20	.....	690	1.036	12.8	10.3	.81	.37	.34	.43	.06	.83	.942	.775	.087	.080	1.05	35	11.2	...do.....	116.6	25.8	78.0
21	.....																			190.4	41.8	78.0
22	90	872	1.034	15.4	12.3	.82	.34	.31	.66	.08	1.20	1.055	.861	.039	.155	1.24	45	11.5	...do.....	118.6	29.8	74.9
23	.....																					
24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	114.6	28.7	75.0
25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41.0	16.3	60.2
26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	143.4	44.0	69.3

BALANCE.

		Grams.
Nitrogen in food		127.6
Nitrogen in excreta:		
Urine	120.4	
Feces	10.3	
		130.7
Balance		−3.1

	Grams
Ether extract in feces	33.9

Daily results on urine and feces—Continued.

No. II.

FORE PERIOD. SUBJECT II H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
June 24	90.5	810	1.036	14.5	11.9	0.74	0.33	0.30	0.72	0.08	0.73	1.064	0.818	0.054	0.192	1.18	40	11.6	Acid	......	......	......
25	......																			......	......	......
26	90.1	892	1.031	13.3	10.5	.99	.30	.27	.61	.09	.81	.970	.770	.036	.164	1.15	40	12.7	do	......	......	......
27	......																			157.1	32.7	79.2
28	90.2	620	1.032	10.3	8.31	.79	.24	.21	.64	.07	.25	.788	.592	.038	.158	.95	40	7.25	do	76.2	16.8	77.4
29	89.2																			259.5	31.8	87.5
30	89.8	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	386.7	52.2	86.5
July 1	89.4	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	65.6	9.9	84.9
2	89.1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......

BALANCES.

		Grams.
Nitrogen in food		89.5
Nitrogen in excreta:		
Urine	76.2	
Feces	7.7	
		83.9
Balance		+5.6

	Grams.
Ether extract in food	603.0
Ether extract in feces	19.9
Balance	583.1

No. III. LOW BENZOATE PERIOD. SUBJECT H H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 3	90.4																					
4	....	1,126	1.022	11.8	9.33	0.86	0.26	0.23	0.61	0.09	0.65	0.920	0.709	0.051	0.160	0.84	55	11.8	Acid......	258	39.6	84.7
5	....																					
6	89.6	900	1.032	13.7	11.1	.81	.32	.30	.74	.13	.60	1.072	.820	.070	.182	1.38	80	11.7	Sl. acid...	110.6	39.1	63.7
7	89.8																			152.7	39.0	74.5
8	89.6	937	1.030	13.8	11.1	.67	.32	.29	.74	.09	.90	1.04	.760	.050	.230	1.22	55	14.0	Acid......	187.8	47.7	74.0
9	90.0																			45.2	12.8	71.5
10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	72.9	21.3	70.8
11	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	99.8	27.0	70.3

BALANCE.

		Grams.
Nitrogen in food		119.3
Nitrogen in excreta:		
Urine	90.4	
Feces	10.9	
		101.3
Balance		+18.0

	Grams.
Ether extract in feces	45.3

Daily results on urine and feces—Continued.

No. IV. LOW BENZOATE PERIOD. SUBJECT H H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 10	90.2																					
11	90.2	1,130	1.026	14.0	11.2	0.84	0.25	0.22	0.74	0.10	0.87	1.15	0.832	0.047	0.271	1.20	65	15.2	Sl. acid	72.9	18.2	74.9
12	......																			......	......	......
13	90.0	725	1.034	12.6	10.3	.66	.28	.26	.61	.13	.62	.966	.769	.043	.154	1.22	50	9.32	Acid	102.7	26.8	74.0
14	90.2																			201.0	42.3	79.0
15	90.1	1,350	1.026	14.9	12.2	.82	.36	.32	.60	.13	.79	1.124	.852	.052	.220	1.18	40	18.2	do	516.0	65.8	87.3
16	90.4																			137.1	37.8	72.4
17	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	391.4	46.8	89.0

BALANCE.

		Grams.
Nitrogen in food		131.7
Nitrogen in excreta:		
Urine	97.0	
Feces	13.3	
		110.3
Balance		+21.4

	Grams.
Ether extract in feces	30.4

No. V. LOW BENZOATE PERIOD. SUBJECT H H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 17	89.8																					
18	89.0	831	1.030	13.4	10.9	0.73	0.32	0.28	0.61	0.12	0.72	0.997	0.787	0.039	0.171	1.23	Trace.	9.16	Acid	489.0	39.0	92.1
19	....																					
20	89.6	1,202	1.024	15.8	12.8	.84	.33	.29	.60	.16	.97	1.09	.873	.064	.153	1.31	50	11.4	...do	71.7	22.9	68.0
21	89.6																			75.8	25.1	68.2
22	89.8	960	1.027	12.0	10.0	.66	.28	.21	.61	.13	.32	.961	.747	.063	.151	1.17	....	10.0	Sl. acid	55.0	17.1	68.9
23	89.8																			60.4	21.2	64.9
24	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	301.7	62.2	79.4

BALANCES.

		Grams.
Nitrogen in food		114.1
Nitrogen in excreta:		
Urine	95.8	
Feces	9.6	
		105.4
Balance		+8.7

	Grams.
Ether extract in food	1,068.0
Ether extract in feces	38.8
Balance	1,029.2

Daily results on urine and feces—Continued.

NO. VI. LOW BENZOATE PERIOD. SUBJECT II H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 24	90.6																			......	......	......
25	90.0	1,240	1.023	13.2	10.9	0.72	0.33	0.30	0.61	0.11	0.53	1.028	0.794	0.052	0.182	1.08	....	12.0	Sl. acid....	......	......	......
26	....																			126.3	32.0	74.7
27	89.0	900	1.030	13.8	11.0	.82	.37	.32	.72	.12	.77	1.083	.848	.080	.155	1.16	50	10.3	...do......	58.7	18.7	68.1
28	90.0																			94.3	22.4	76.3
29	90.4	1,440	1.021	13.3	10.5	.69	.30	.26	.67	.13	1.01	1.032	.773	.067	.192	1.08	40	16.4	...do......	108.6	29.4	72.9
30	90.4																			132.7	35.2	73.4
31	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	87.0	20.1	76.7
Aug. 1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	140.3	27.0	80.8

BALANCES.

		Grams.
Nitrogen in food		118.3
Nitrogen in excreta:		
Urine	93.8	
Feces	10.2	
		104.0
Balance		+14.3

	Grams.
Ether extract in food	746.3
Ether extract in feces	33.1
Balance	713.2

NO. VII. LOW BENZOATE PERIOD. SUBJECT II II.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
July 31	90.6																			......	......	......
Aug. 1	89.4	968	1.030	13.5	10.9	0.73	0.30	0.26	0.62	0.16	0.79	0.992	0.810	0.051	0.131	1.16	75	12.7	Sl. acid	......	......	......
2	......																			525.0	50.6	90.3
3	89.4	1,130	1.029	13.4	10.5	.82	.27	.24	.63	.16	1.02	1.055	.810	.093	.152	1.25	75	14.8	Acid	......	......	......
4	89.9																			178.2	42.0	76.4
5	89.8	985	1.031	14.9	12.1	.88	.28	.20	.75	.13	.76	1.081	.855	.079	.147	1.25	75	13.6	Sl. acid	76.5	21.6	71.8
6	89.8																			61.4	19.3	68.7
7	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	204.4	46.5	77.2

BALANCES.

		Grams.
Nitrogen in food		116.0
Nitrogen in excreta:		
Urine	97.1	
Feces	9.2	
		106.3
Balance		+9.7

	Grams.
Ether extract in food	933.0
Ether extract in feces	35.3
Balance	897.7

Daily results on urine and feces—Continued.

NO. VIII. LOW BENZOATE PERIOD. SUBJECT II H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 7	90.2																			......	......	......
8	89.9	1,416	1.024	14.5	11.6	0.83	0.33	0.29	0.65	0.09	1.00	1.003	0.780	0.069	0.154	1.15	50	14.1	Sl. acid....	......	......	......
9	....																			113.2	28.8	74.5
10	90.6	1,105	1.028	13.5	10.3	.70	.30	.27	.69	.10	1.41	1.071	.860	.070	.141	1.09	....	13.7	Acid.......	160.8	39.4	75.5
11	89.8																			......	......	......
12	90.0	1,127	1.025	14.2	11.5	.64	.28	.24	.62	.09	1.07	1.057	.823	.075	.159	1.16	....	11.4	Sl. acid...	91.3	30.0	66.1
13	89.8																			147.3	44.5	69.8
14	....	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	....	......	....	158.8	48.0	69.8

BALANCES.

		Grams.
Nitrogen in food		120.8
Nitrogen in excreta:		
Urine	98.9	
Feces	9.1	
		108.0
Balance		+12.8

	Grams.
Ether extract in food	1,159.4
Ether extract in feces	45.2
Balance	1,114.2

NO. IX.

LOW BENZOATE PERIOD. SUBJECT H H.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Aug. 14	90.9																			......	......	......
15	90.0	1,213	1.028	15.5	13.1	0.77	0.33	0.30	0.79	0.10	0.41	1.148	0.932	0.078	0.138	1.26	60	15.8	Sl. acid...	......	......	......
16	......																			99.6	22.2	77.7
17	89.8																			89.2	26.8	69.9
18	89.0	965	1.022	14.4	11.7	.83	.30	.26	.70	.09	.78	1.055	.845	.035	.175	1.19	......	7.62	...do.....	296.0	48.3	83.7
19	89.2																			......	......	......
20	89.6	1,405	1.025	16.1	13.1	.79	.34	.31	.77	.12	.98	1.085	.890	.035	.160	1.43	35	12.0	Acid.....	106.0	26.6	74.9
21	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	350.8	44.3	87.4

BALANCES.

		Grams.
Nitrogen in food		99.1
Nitrogen in excreta:		
Urine	107.5	
Feces	8.8	
		116.3
Balance		-17.2

	Grams
Ether extract in food	985.6
Ether extract in feces	42.6
Balance	943.0

Daily results on urine and feces—Continued.

No. X. LOW BENZOATE PERIOD. SUBJECT II H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 21	89.4	1,366	1.021	13.1	10.4	0.71	0.31	0.25	0.79	0.12	0.77	0.943	0.749	0.050	0.144	1.08	35	12.8	Acid	....	....	....
22	....																			....	....	....
23	....																			....	....	....
24	88.4	900	1.025	11.1	9.27	.58	.28	.22	.61	.10	.26	.765	.613	.037	.115	.93	30	9.92	...do	214.5	51.2	76.3
25	89.0																					
26	89.6	1,675	1.020	14.8	12.0	.73	.29	.25	.72	.16	.90	1.076	.875	.057	.144	1.05	75	13.1	Sl. acid	183.3	45.3	75.3
27	89.0																					
28	89.6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	84.0	23.9	71.6
29	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	87.8	26.4	70.0

BALANCES.

		Grams.
Nitrogen in food		120.6
Nitrogen in excreta:		
Urine	91.3	
Feces	8.0	
		99.3
Balance		+21.3

	Grams.
Ether extract in food	1,081.0
Ether extract in feces	36.1
Balance	1,044.9

No. XI. HIGH BENZOATE PERIOD. SUBJECT H H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 2	......																			......	......	......
3	91.6	1,340	1.022	10.9	8.75	0.54	0.25	0.22	0.73	0.12	0.55	0.760	0.583	0.047	0.130	1.31	55	11.9	Sl. acid	......	......	......
4	90.6																			212.0	47.9	77.3
5	90.9	1,600	1.025	15.6	12.6	1.02	.33	.27	.81	.13	.71	1.183	.924	.065	.194	1.39	80	16.9	do	92.5	18.0	80.5
6	90.4																			162.5	37.8	76.7
7	90.2																			......	......	......
8	90.8	1,750	1.020	15.5	12.9	.88	.33	.28	.65	.14	.53	1.086	.866	.064	.156	1.22	85	16.2	Acid	137.6	41.7	69.7
9	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......				132.2	35.7	73.3

BALANCES.

		Grams.
Nitrogen in food		102.7
Nitrogen in excreta:		
Urine	99.6	
Feces	10.1	
		109.7
Balance		−7.0

	Grams.
Ether extract in food	914.3
Ether extract in feces	36.3
Balance	878.0

Daily results on urine and feces—Continued.

No. XII. HIGH BENZOATE PERIOD. SUBJECT II H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 9	90.6	2,000	1.023	20.3	17.7	0.99	0.40	0.36	0.96	0.18	0.07	1.586	1.178	0.163	0.245	1.74	75	11.1	Acid......	......	......	......
10	90.2																					
11	90.6																			186.5	47.7	74.3
12	90.2	1,266	1.026	15.9	13.2	.94	.33	.29	.81	.15	.47	1.211	.963	.052	.196	1.29	80	6.7	Sl. acid ...	......	......	......
13	90.2																			95.7	28.5	70.2
14	91.1	1,790	1.022	15.9	12.6	.94	.33	.29	.88	.19	.96	1.237	.950	.071	.216	1.26	45	10.3	...do......	182.2	39.3	78.5
15	91.4																			......	......	......
16	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	180.4	51.9	71.6

BALANCES.

		Grams.
Nitrogen in food		120.7
Nitrogen in excreta:		
Urine	120.1	
Feces	8.6	
		128.7
Balance		−8.0

	Grams.
Ether extract in food	1,072.7
Ether extract in feces	42.7
Balance	1,030.0

No. XIII. HIGH BENZOATE PERIOD. SUBJECT H H.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gms.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Sept. 16	91.1																					
17	91.3	1,500	1.022	15.4	11.7	0.91	0.33	0.31	0.95	0.20	1.30	1.15	1.002	0.060	0.90	1.25	85	15.7	Acid	130.4	27.0	79.3
18	....																			98.0	25.5	77.1
19	90.9	1,110	1.027	15.6	12.6	.85	.32	.29	.73	.21	.89	1.095	.938	.067	.090	1.15	90	13.3	...do	50.2	13.7	72.9
20	....																					
21	90.9	2,070	1.018	15.5	12.6	.94	.32	.28	.87	.23	.54	1.124	.897	.053	.174	1.24	75	17.8	...do	210.8	51.5	76.5
22	91.1																			255.9	36.2	85.9
23	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	90.0	24.5	72.8

BALANCES.

		Grams.
Nitrogen in food		117.8
Nitrogen in excreta:		
Urine	108.6	
Feces	9.8	
		118.4
Balance		-0.6

	Grams.
Ether extract in food	1,071.3
Ether extract in feces	38.0
Balance	1,033.8

Daily results on urine and feces—Continued.

No. XIV. HIGH BENZOATE PERIOD. SUBJECT II H.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 23	90.6	1,475	1.023	17.4	14.3	0.99	0.35	0.32	0.82	0.30	0.64	1.291	1.045	0.065	0.181	1.41	85	14.7	Acid	......	......	......
24	91.1																			131.5	29.7	77.4
25	91.1																			......	......	......
26	......	1,220	1.027	14.3	11.4	.84	.31	.28	.67	.37	.71	1.095	.910	.057	.128	1.38	90	14.7	do	......	......	......
27	......																			395.4	45.5	88.2
28	91.1	1,220	1.030	15.8	12.8	.71	.44	.39	.76	.48	.62	1.169	.929	.069	.171	1.26	80	12.4	Sl. acid	303.0	80.7	73.4
29	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	242.4	74.6	69.2

BALANCES.

		Grams.
Nitrogen in food		[a] 109.0
Nitrogen in excreta:		
Urine	93.5	
Feces	12.3	
		105.8
Balance		+3.2

	Grams.
Ether extract in food	414.4
Ether extract in feces	50.3
Balance	364.1

[a] Calculated proportionally from 3 days' collection of food in which nitrogen amounted to 54.5 grams.

No. XV. HIGH BENZOATE PERIOD. SUBJECT H H.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 29	91.3	1,770	1.023	18.9	15.2	0.83	0.38	0.33	0.92	0.65	0.92	1.282	1.075	0.061	0.146	1.57	80	16.6	Acid	......	......	......
30	91.5	1,860	1.020	17.5	13.6	.81	.33	.28	.88	.67	1.21	1.190	.953	.047	.190	1.41	65	14.8	...do	105.0	22.5	78.4
Oct. 1	91.3	1,310	1.025	16.7	13.3	.88	.34	.29	.75	.62	.79	1.170	.950	.035	.185	1.31	70	11.4	...do	156.1	33.8	78.3
2	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	69.1	22.1	68.1

BALANCES.

		Grams.
Nitrogen in food		52.0
Nitrogen in excreta:		
Urine	53.1	
Feces	4.5	
		57.6
Balance		−5.6

	Grams.
Ether extract in food	469.7
Ether extract in feces	20.7
Balance	449.0

Daily results on urine and feces—Continued.

No. XVI. AFTER PERIOD. SUBJECT II H.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 2	91.7	2,180	1.021	17.6	13.9	1.22	0.41	0.36	0.86	0.16	1.05	1.378	1.058	0.063	0.257	1.46	10	13.2	Acid.....	....	....	....
3	91.7	} 1,305	1.023	14.9	12.0	.65	.34	.29	.75	.15	1.08	1.070	.857	.053	.160	1.14	50	14.0	...do......	146.3	39.3	73.2
4	....																			107.1	26.4	75.3
5	90.9	} 1,123	1.018	16.5	13.7	.82	.32	.27	.81	.11	.74	1.196	.978	.069	.149	1.33	10	12.1	...do......	175.1	32.3	81.4
6	91.3																			231.7	61.1	73.6

BALANCES.

		Grams.
Nitrogen in food		93.0
Nitrogen in excreta:		
Urine	80.4	
Feces	8.1	
		88.5
Balance		+4.5

	Grams.
Ether extract in food	775.3
Ether extract in feces	36.8
Balance	738.5

No. XVII.

AFTER PERIOD. SUBJECT H H.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Oct. 7	91.7	1,520	1.018	14.7	12.1	0.82	0.30	0.26	0.80	0.05	0.64	1.063	0.897	0.046	0.120	1.40	55	11.3	Sl. acid			
8	91.3																			214.5	28.8	86.6
9	91.5																			99.7	22.3	77.6
10	91.5	1,476	1.022	16.9	13.9	.81	.35	.30	.84	.05	.95	1.189	.970	.034	.185	1.28	60	9.6	do	69.3	18.5	73.4
11	91.3																					
12																				179.4	52.7	70.6

BALANCES.

		Grams.
Nitrogen in food		92.4
Nitrogen in excreta:		
Urine	80.1	
Feces	6.3	
		86.4
Balance		+6.0

	Grams.
Ether extract in food	749.3
Ether extract in feces	26.7
Balance	722.6

Daily results on urine and feces—Continued.

No. XVIII. AFTER PERIOD. SUBJECT II H.

Date.	Body weight.	Urine: Volume.	Urine: Specific gravity.	Urine: Total nitrogen.	Urine: Urea nitrogen.	Urine: Ammonia nitrogen.	Urine: Purine nitrogen.	Urine: Uric acid nitrogen.	Urine: Creatinine nitrogen.	Urine: Hippuric acid nitrogen.	Urine: Undetermined nitrogen.	Urine: Total sulphur.	Urine: Inorganic sulphur.	Urine: Ethereal sulphur.	Urine: Neutral sulphur.	Urine: Phosphate phosphorus.	Urine: Indican (Fehling's sol.=100).	Urine: Chlorine as NaCl.	Urine: Reaction.	Feces: Weight: Moist.	Feces: Weight: Air dry.	Feces: Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 12	91.3																					
13	91.5	1,425	1.024	16.0	13.0	0.92	0.31	0.28	0.76	0.05	0.95	1.021	0.830	0.062	0.129	1.16	30	13.2	Acid	73.0	13.7	81.3
14	91.5	1,400	1.023	14.4	11.8	.94	.28	.23	.69	.07	.62	1.005	.793	.046	.166	1.19	30	13.6	do	284.0	56.6	80.1
15	91.5																					
16																				171.0	38.0	77.8

BALANCES.

		Grams.
Nitrogen in food		58.2
Nitrogen in excreta:		
Urine	46.4	
Feces	5.9	
		52.3
Balance		+5.9

	Grams.
Ether extract in food	439.0
Ether extract in feces	23.2
Balance.	415.8

No. I.

FORE PERIOD. SUBJECT III O.

Date.		Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
		Kilos.	c. c.		Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.		Gms.		Gms.	Gms.	P. ct.
May	27	....																			....	....	....
	28	....																			....	....	....
	29	....	1,163	1.027	13.6	......	0.87	0.23	0.16	0.43	......	......	0.953	0.726	0.070	0.157	0.96	50	11.3	Acid......	62.0	18.0	71.0
	30	....																			68.0	14.0	79.4
	31	....																			118.0	31.0	73.7
June	1	....																			....	....	....
	2	....																			138.0	30.0	78.3
	3	71.3	1,013	1.026	12.7	......	.83	.25	.16	.48	......	......	.956	.746	.075	.135	.84	45	12.9	...do......	147.0	18.0	87.8
	4	....																			....	....	....
	5	71.0																			196.0	40.1	79.6
	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	117.0	20.4	83.0
	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	159.0	27.9	82.5

Nitrogen in excreta:	Grams.
Urine	131.5
Feces	12.7
	144.2

Daily results on urine and feces—Continued.

No. IA.

FORE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
June 6	....																			....	....	....
7	70.6																			....	....	....
8	....	1,095	1.025	12.7	9.65	0.98	0.26	0.17	0.42	0.07	1.32	0.959	0.746	0.064	0.149	0.96	35	13.1	Acid......	160.0	28.7	82.1
9	....																			....	....	....
10	70.3																			144.0	38.7	73.2
11	....																			95.0	17.0	82.1
12	....																			26.5	8.3	68.6
13	....	1,001	1.025	12.7	9.79	.91	.25	.18	.39	.07	1.19	.986	.698	.097	.191	.97	5	11.3	...do......	158.0	35.2	77.7
14	....																			105.0	29.5	71.9
15	69.1																			190.0	22.5	88.1
16	....	1,022	1.029	12.8	10.0	.93	.25	.20	.47	.07	1.08	.968	.77	.047	.151	.81	45	11.3	...do......	....	....	....
17	69.1																			103.0	28.6	72.2

Nitrogen in excreta:	*Grams.*
Urine........................	152.6
Feces........................	14.0
	166.6

No. 11. FORE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
June 18	69.4	915	1.028	11.8	9.87	0.93	0.29	0.21	0.50	0.08	0.13	0.927	0.696	0.066	0.165	0.90	40	7.45	Acid			
19	69.4																			136.0	27.0	80.0
20	69.3	930	1.026	12.6	10.4	.70	.28	.22	.52	.07	.63	.793	.645	.055	.093	.90	35	10.5	do	127.4	23.4	81.7
21	....																					
22	68.6	1,022	1.025	13.0	10.8	.89	.30	.22	.43	.07	.51	.932	.745	.045	.142	.89	25	12.0	do			
23	69.1																			264.0	44.7	83.1
24	68.8	1,085	1.026	13.8	11.2	.98	.27	.22	.42	.06	.87	1.017	.789	.074	.154	.91	35	14.2	do	243.9	29.1	88.1
25	69.1																					
26	69.3																			60.0	17.6	70.8
27	68.3																					
28	69.3																			124.8	24.3	80.5

BALANCES.

		Grams.
Nitrogen in food		112.5
Nitrogen in excreta:		
Urine	102.4	
Feces	11.0	
		113.4
Balance		-0.9

	Grams.
Ether extract in food	847.5
Ether extract in feces	37.9
Balance	809.6

Daily results on urine and feces—Continued.

No. III. LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm*	*Gm.*	*Gm*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
June 29	69.3	1,215	1.024	12.8	10.1	1.04	0.29	0.24	0.49	0.16	0.72	0.986	0.744	0.085	0.157	0.71	65	16.7	Acid	......	......	......
June 30	69.2																			222.8	30.5	86.3
July 1	69.5	1,620	1.021	15.3	12.7	1.05	.25	.20	.54	.15	.61	1.057	.819	.065	.173	1.00	60	13.9	...do	73.4	14.4	80.4
July 2	69.2																			93.1	21.3	77.1
July 3	69.3	1,450	1.019	13.4	10.6	.85	.30	.23	.55	.17	.93	1.012	.777	.074	.161	.95	65	13.3	...do	108.7	24.9	77.1
July 4	68.8																			104.0	20.4	80.4
July 5	......																			157.0	23.1	85.3
July 6	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	47.5	7.8	83.6

Nitrogen in excreta:	*Grams.*
Urine	96.4
Feces	11.1
	107.5

No. 111A.

LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																	Feces.		
																			Weight.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Moist.	Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	Gms.
July 6	68.8	1,130	1.026	14.1	11.5	0.97	0.28	0.23	0.52	0.16	0.67	1.123	0.845	0.091	0.187	1.04	65	15.1	Acid	.....	.....	.....
7	68.9																			128.0	18.0	85.9
8	68.9	1,797	1.019	17.2	14.4	1.16	.25	.20	.57	.19	.63	1.241	.979	.042	.220	1.17	45	14.5	do	134.8	24.0	82.2
9	68.9																			68.8	17.7	74.2
10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	113.5	35.4	68.8

Nitrogen in excreta:	Grams.
Urine	62.6
Feces	6.6
	69.2

Daily results on urine and feces—Continued.

No. IV. LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 10	68.9																			......	......	......
11	......	1,333	1.021	14.1	11.7	0.89	0.23	0.19	0.45	0.18	0.65	1.049	0.813	0.068	0.168	1.04	40	11.0	Acid......	......	......	......
12	......																			......	......	......
13	68.7	1,500	1.020	15.4	12.7	.92	.25	.20	.50	.12	.91	1.137	.893	.063	.181	.96	65	6.75	...do......	127.1	38.7	69.6
14	......																			80.3	23.4	70.9
15	68.7	1,762	1.023	16.4	13.9	1.04	.28	.23	.51	.12	.55	1.145	.876	.100	.169	1.15	40	10.5	...do......	359.6	58.5	83.7
16	68.9																			217.5	22.2	89.8
17	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	91.1	24.0	73.7

Nitrogen in excreta:	*Grams.*
Urine	105.9
Feces	9.7
	115.6

No. V. LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
July 17	69.1																			......	......	......
18	69.1	1,083	1.022	13.4	11.1	0.87	0.23	0.18	0.52	0.15	0.53	1.030	0.810	0.087	0.133	1.04	50	10.7	Acid	......	......	......
19	69.2																			......	......	......
20	......	1,910	1.017	14.2	11.8	.75	.19	.15	.65	.13	.68	.961	.770	.092	.099	.98	25	16.4	do.	280.5	65.1	76.8
21	69.6																			175.0	33.6	80.8
22	69.2	1,185	1.024	14.9	12.3	.87	.18	.15	.60	.12	.83	1.130	.875	.080	.175	1.13	......	12.3	do.	150.5	26.7	82.3
23	68.8																			120.7	17.1	85.8
24	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	273.8	32.7	88.1

Nitrogen in excreta:	Grams.
Urine	98.4
Feces	10.5
	108.9

Daily results on urine and feces—Continued.

No. VI. LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																		Feces.		
																				Weight.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 24	69.1																			.....	.....	.....
25	69.5	1,470	1.019	13.2	10.9	0.95	0.20	0.16	0.41	0.17	0.57	0.94	0.723	0.083	0.134	0.96	....	14.1	Acid......	187.0	22.2	88.1
26	....																			470.0	48.3	89.7
27	69.2																			.....	.....	.....
28	68.9	1,470	1.021	15.6	12.5	.93	.31	.27	.56	.15	1.15	1.132	.954	.088	.090	1.06	50	16.1	...do.......	39.2	8.4	78.6
29	69.2																			238.0	47.4	80.1
30	69.7	1,410	1.022	15.2	12.1	.98	.25	.21	.53	.15	1.18	1.047	.804	.092	.151	1.04	30	15.5	...do.......	202.0	31.2	84.6
31	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	196.5	32.7	83.4

Nitrogen in excreta:	*Grams.*
Urine	101.2
Feces	11.2
	112.4

No. VII. LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
July 31	69.7																			......	......	......
Aug. 1	69.5	1,216	1.022	12.8	10.2	0.86	0.21	0.17	0.48	0.12	0.93	1.029	0.810	0.054	0.165	1.09	20	12.5	Acid.....	245.7	34.2	86.1
2	69.1																			139.2	20.7	85.1
3	69.1	1,290	1.024	15.3	12.3	.89	.26	.21	.51	.13	1.21	1.108	.895	.071	.142	1.03	45	14.8	...do.....	217.1	30.4	86.6
4	69.5																			165.8	23.5	86.8
5	69.5	1,292	1.021	13.2	10.4	.94	.21	.17	.56	.15	.94	.931	.745	.084	.102	1.13	35	12.5	...do.....	206.0	34.1	83.5
6	69.3																			147.0	26.1	82.3
7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	135.0	32.5	76.1

BALANCES.

		Grams.
Nitrogen in food		106.2
Nitrogen in excreta:		
Urine	95.4	
Feces	12.5	
		107.9
Balance		−1.7

	Grams.
Ether extract in food	891.5
Ether extract in feces	44.8
Balance	846.7

Daily results on urine and feces—Continued.

No. VIII. LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 7	69.5																			......	......	......
8	69.7	1,483	1.020	14.6	11.8	0.93	0.26	0.22	0.59	0.16	0.86	1.110	0.890	0.068	0.152	1.12	Trace.	12.9	Acid......	245.0	31.8	87.0
9	......																			162.5	28.7	82.4
10	69.7	1,470	1.021	15.9	12.9	.84	.30	.25	.57	.13	1.16	1.209	.982	.084	.143	1.32	....	12.7	...do......	71.0	14.6	79.5
11	69.7																			......	......	......
12	69.8	1,625	1.019	14.5	11.8	.83	.27	.21	.53	.14	.93	.998	.853	.065	.080	1.14	....	12.9	...do......	306.8	61.0	80.1
13	69.7																			164.0	30.9	81.2
14	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	153.5	27.6	82.1

Nitrogen in excreta:	*Grams.*
Urine	104.6
Feces	12.2
	116.8

No. IX. LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 14	69.7																			......	......	......
15	69.7	1,443	1.020	12.8	10.6	0.77	0.22	0.18	0.56	0.10	0.55	0.913	0.716	0.096	0.101	0.96	......	13.5	Acid	65.3	14.9	77.3
16	....																			134.7	38.7	71.4
17	70.0	1,720	1.017	13.2	11.2	0.71	.22	.17	.49	.11	.47	.927	.750	.063	.114	.99	......	12.2	...do.	132.2	21.3	83.9
18	70.0																			209.5	34.2	83.6
19	70.0	1,520	1.021	15.3	12.8	.88	.25	.19	.56	.16	.65	1.063	.893	.086	.084	1.16	25	13.1	...do.	70.4	14.7	79.2
20	70.3																			246.0	46.2	81.2
21	....	....	....	....	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	78.5	20.5	73.8

Nitrogen in excreta:	*Grams.*
Urine	95.4
Feces	12.2
	107.6

Daily results on urine and feces—Continued.

No. X. LOW BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Aug. 21	70.2																			......	......	......
22	70.0	1,663	1.019	15.7	12.9	0.83	0.27	0.21	0.50	0.14	1.06	1.113	0.905	0.049	0.159	1.10	50	14.6	Acid	211.0	41.9	80.1
23	......																			72.5	19.0	73.8
24	70.0																			120.9	15.1	87.5
25	70.1	1,166	1.018	15.6	13.0	.76	.23	.17	.53	.12	.96	1.091	.907	.073	.111	1.06	25	17.6	do	......	......	......
26	70.2																			128.0	32.6	74.6
27	70.1	1,130	1.020	14.4	11.8	.78	.21	.16	.57	.11	.93	1.030	.850	.080	.100	1.14	50	15.1	do	174.2	35.7	79.5
28	70.2	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	227.0	40.6	80.8

BALANCES.

		Grams.
Nitrogen in food		116.8
Nitrogen in excreta:		
Urine	107.1	
Feces	11.7	
		118.8
Balance		−2.0

	Grams.
Ether extract in food	835.5
Ether extract in feces	43.1
Balance	792.4

No. XI. HIGH BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Sept. 2	......	1,840	1.016	13.0	11.1	0.41	0.24	0.18	0.58	0.14	0.53	0.879	0.656	0.085	0.138	1.50	50	12.7	Acid	......	......	......
3	......																			......	......	......
4	70.4																			166.7	28.9	76.7
5	70.4	1,703	1.019	14.5	12.5	.52	.25	.20	.59	.17	.47	1.020	.797	.081	.142	.94	65	14.4	...do......	199.7	41.5	79.2
6	......																			213.0	36.8	82.7
7	70.2	1,425	1.022	15.6	13.1	.63	.25	.20	.56	.17	.89	1.119	.883	.089	.147	.95	60	12.5	...do......	175.0	21.0	88.0
8	70.4																			126.9	21.6	80.7
9	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	168.0	34.2	79.6

Nitrogen in excreta:	Grams.
Urine	100.7
Feces	12.6
	113.3

Daily results on urine and feces—Continued.

No. XII.

HIGH BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Urine. Specific gravity.	Urine. Total nitrogen.	Urine. Urea nitrogen.	Urine. Ammonia nitrogen.	Urine. Purine nitrogen.	Urine. Uric acid nitrogen.	Urine. Creatinine nitrogen.	Urine. Hippuric acid nitrogen.	Urine. Undetermined nitrogen.	Urine. Total sulphur.	Urine. Inorganic sulphur.	Urine. Ethereal sulphur.	Urine. Neutral sulphur.	Urine. Phosphate phosphorus.	Urine. Indican (Fehling's sol.=100).	Urine. Chlorine as NaCl.	Urine. Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 9	70.4	1,235	1.025	14.8	12.7	0.68	0.23	0.19	0.53	0.15	0.51	1.053	0.863	0.051	0.139	0.97	50	12.7	Acid	......	......	......
10	70.4																			......	......	......
11	70.4	1,530	1.026	15.8	13.4	.88	.30	.25	.57	.18	.47	1.153	.889	.096	.168	1.04	85	18.2	do	247.0	43.9	82.2
12	70.3																			385.0	49.8	87.1
13	......																			......	......	......
14	70.4	1,545	1.021	15.1	12.5	.84	.25	.20	.58	.20	.73	1.08	.846	.067	.170	.88	50	16.2	do	68.9	18.6	73.0
15	70.6																			97.5	25.7	73.7
16	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	60.0	17.5	70.8

Nitrogen in excreta:	*Grams.*
Urine	107.2
Feces	9.7
	116.9

No. XIII. HIGH BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Sept. 16	70.3																			....	....	....
17	70.2	1,605	1.020	16.0	13.1	0.86	0.28	0.23	0.57	0.24	0.85	1.109	0.897	0.091	0.121	1.00	70	13.3	Acid	145.5	35.7	75.5
18	70.6																			285.0	39.1	86.3
19	70.4	1,466	1.021	16.6	13.5	.92	.28	.23	.55	.25	1.10	1.184	.928	.073	.183	1.15	65	12.9	do	62.5	15.8	74.8
20	....																			59.0	14.5	74.9
21	70.3																			67.0	18.8	72.0
22	70.3	1,770	1.016	17.1	14.7	.88	.27	.21	.72	.28	.25	1.155	.938	.050	.167	1.16	55	10.6	do	198.0	45.3	77.1
23	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	52.5	7.5	85.7
24	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	88.1	23.5	73.3

BALANCES.

		Grams.
Nitrogen in food		133.1
Nitrogen in excreta:		
Urine	116.0	
Feces	12.1	
		128.1
Balance		+5.0

	Grams.
Ether extract in food	897.0
Ether extract in feces	54.6
Balance	842.4

Daily results on urine and feces—Continued.

No. XIV. HIGH BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 23	70.6	1,595	1.020	14.1	11.5	0.72	0.25	0.19	0.68	0.35	0.60	0.981	0.782	0.075	0.124	0.95	45	16.9	Acid	.....	.....	.....
24	70.4																			163.0	18.3	88.9
25	70.4																			201.0	24.7	87.7
26	70.4	1,410	1.020	13.4	10.7	.72	.22	.17	.52	.42	.82	.950	.740	.036	.174	1.02	60	11.8	...do	79.4	23.9	68.8
27	....																			130.2	31.8	75.5
28	70.8	1,610	1.020	14.0	10.9	.77	.27	.22	.71	.50	.85	.920	.748	.058	.114	.95	55	16.6	...do	98.0	15.6	84.1
29	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	163.1	35.0	78.5

Nitrogen in excreta:	*Grams.*
Urine	82.4
Feces	9.6
	92.0

No. XV. HIGH BENZOATE PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Sept. 29	71.0	2,530	1.016	16.2	13.5	0.81	0.24	0.18	0.66	0.72	0.27	1.132	0.893	0.089	0.150	1.08	65	19.2	Acid	.....	.....	.....
30	70.9	2,080	1.018	15.3	12.2	.80	.25	.19	.62	.76	.67	.967	.782	.104	.081	1.09	65	20.2	do.	.....	.....	.....
Oct. 1	70.9	1,390	1.022	12.7	9.95	.70	.23	.18	.50	.48	.84	.895	.719	.055	.121	0.99	60	10.8	do.	171.0	41.2	75.9
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	115.3	26.4	77.2
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	95.4	22.5	76.4

BALANCES.

		Grams.
Nitrogen in food		53.6
Nitrogen in excreta:		
Urine	44.2	
Feces	4.6	
		48.8
Balance		+4.8

	Grams.
Ether extract in food	366.0
Ether extract in feces	16.1
Balance	349.9

Daily results on urine and feces—Continued.

No. XVI.

AFTER PERIOD. SUBJECT III O.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm*	*Gm*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 2	70.5	2,170	1.017	13.6	11.1	0.65	0.29	0.22	0.58	0.18	0.80	0.915	0.718	0.069	0.128	1.13	20	16.8	Acid	......	......	......
3	70.7	} 1,750	1.017	12.1	9.98	.62	.24	.18	.56	.16	.55	.829	.629	.092	.108	1.03	65	14.1	...do......	......	......	......
4	......																			147.0	33.1	77.5
5	70.4	} 1,780	1.018	13.5	11.0	.70	.22	.16	.65	.11	.83	.907	.721	.079	.107	97	45	14.6	...do......	52.0	15.0	71.1
6	70.6																			226.7	42.8	81.1
7	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	126.5	18.4	85.4

Nitrogen in excreta:	*Grams.*
Urine	64.8
Feces	6.9
	71.7

No. XVII. AFTER PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 7	70.7	1,575	1.020	16.7	13.6	0.90	0.26	0.20	0.66	0.11	1.17	1.165	0.928	0.052	0.185	1.06	60	11.7	Acid	......	......	......
8	70.7																			188.4	29.6	84.3
9	70.9																			......	......	......
10	70.8	1,313	1.020	13.6	11.0	.82	.23	.18	.58	.09	.88	1.043	.822	.081	.140	.95	50	8.6	do	220.3	48.4	78.0
11	....																			203.0	30.6	85.1
12	....																			146.0	21.6	85.2

BALANCES.

		Grams.
Nitrogen in food		83.3
Nitrogen in excreta:		
Urine	74.2	
Feces	7.9	
		82.1
Balance		+1.2

	Grams.
Ether extract in food	621.3
Ether extract in feces	24.3
Balance	597.0

Daily results on urine and feces—Continued.

No. XVIII. AFTER PERIOD. SUBJECT III O.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 12	71.3	1,450	1.022	14.8	12.2	0.87	0.26	0.20	0.57	0.07	0.83	1.048	0.886	0.091	0.071	0.92	40	14.7	Acid	......	......	......
13	71.0																			173.0	19.4	88.7
14	70.9	1,500	1.022	15.3	12.4	1.05	.28	.22	.58	.07	.92	1.03	.810	.125	.098	1.03	65	13.5	...do	166.7	32.5	80.5
15	70.9																			......	......	......
16	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	...do	118.0	33.7	71.6

Nitrogen in excreta:	*Grams.*
Urine	60.2
Feces	5.2
	65.4

No. I. FORE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
June 14	....	760	1.036	20.1	17.4	0.95	0.27	0.22	0.49	0.07	0.92	1.145	0.955	0.068	0.122	......	......	......	Acid......	173.3	31.6	82.1
15	....	970	1.031	17.1	15.0	.80	.27	.23	.43	.07	.53	1.315	1.065	.069	.181	1.61	45	11.9	...do......	225.0	34.1	84.9
16	....																			223.0	36.3	83.7
17	68.1	1,305	1.026	16.1	14.1	.76	.25	.21	.41	.06	.22	1.357	1.09	.040	.227	1.67	40	15.1	...do......	183.0	36.0	80.3
18	....																			261.0	33.5	87.2
19	68.0	1,020	1.031	17.2	14.6	.82	.27	.23	.46	.07	.98	1.503	1.153	.082	.268	1.62	45	12.0	...do......	160.0	28.3	82.4
20	....																			171.0	33.3	81.5
21	....	....	......																			
22	....	....	......																	145.5	28.8	80.2

Nitrogen in excreta:	Grams.
Urine	121.1
Feces	13.3
	134.4

Daily results on urine and feces—Continued.

No. II. FORE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
June 21	67.5	842	1.034	16.1	13.6	0.57	0.29	0.24	0.51	0.06	1.07	1.126	0.991	0.042	0.093	1.38	50	9.45	Acid	......	......	......
22	67.5																					
23	67.2	910	1.031	14.9	12.7	.58	.27	.22	.48	.07	.80	1.135	.972	.040	.123	1.37	45	11.7	...do	253.3	34.5	86.4
24	......																			284.5	38.7	86.4
25	67.3	995	1.030	16.6	14.2	.58	.31	.23	.45	.08	.98	1.215	1.038	.042	.135	1.47	45	10.7	...do	176.7	26.3	85.2
26	66.6																			215.0	31.9	85.2
27	66.1	890	1.030	15.7	13.6	.53	.27	.22	.48	.08	.75	1.105	.921	.039	.145	1.30	5	8.56	...do	72.6	13.5	81.4
28	66.1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	153.5	30.4	80.2
29	65.7	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	174.0	25.2	85.5
30	66.1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	94.9	19.7	79.3

BALANCES.

		Grams.
Nitrogen in food		112.0
Nitrogen in excreta:		
Urine	110.9	
Feces	12.0	
		122.9
Balance		—10.9

	Grams.
Ether extract in food	834.0
Ether extract in feces	37.1
Balance	796.9

No. III. LOW BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
July 3	66.0																			......	......	......
4	66.1	925	1.030	13.3	10.5	0.83	0.24	0.20	0.65	0.08	1.00	1.044	0.824	0.061	0.159	1.22	60	11.9	Acid......	149.1	30.6	79.5
5	....																			144.0	30.6	78.8
6	66.1	745	1.032	12.9	10.7	.65	.22	.20	.64	.11	.58	.985	.790	.072	.123	1.27	50	8.95	...do......	130.7	21.9	83.4
7	66.2																			163.6	33.6	79.4
8	66.5	1,095	1.028	14.6	12.6	.54	.28	.23	.60	.13	.45	1.098	.872	.042	.184	1.34	45	12.6	...do......	234.6	39.0	83.4
9	66.3																			169.9	32.4	80.9
10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	200.3	34.5	82.8

Nitrogen in excreta:	Grams.
Urine	95.2
Feces	11.8
	107.0

Daily results on urine and feces—Continued.

No. IV.

LOW BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 10	66.5																			......	......	......
11	......	870	1.027	12.8	10.5	0.57	0.25	0.22	0.54	0.10	0.84	0.969	0.777	0.052	0.140	1.25	45	12.6	Acid......	242.0	32.2	86.7
12	66.6																			227.7	39.6	82.6
13	66.4	561	1.030	13.2	11.2	.58	.24	.20	.52	.09	.57	1.035	.823	.044	.168	1.20	55	8.92	...do......	172.7	25.8	85.1
14	66.0																			53.3	11.4	78.7
15	66.8	756	1.025	13.7	11.7	.65	.26	.22	.60	.08	.41	1.094	.864	.051	.179	1.34	40	13.0	...do......	209.4	48.9	76.7
16	66.6																			196.3	35.1	82.1
17	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	129.5	24.6	81.0

Nitrogen in excreta:	*Grams.*
Urine	92.2
Feces	11.1
	103.3

No. V. LOW BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 17	66.2																					
18	66.1	935	1.030	12.9	10.5	0.66	0.24	0.20	0.64	0.07	0.79	1.015	0.822	0.024	0.169	1.13	35	11.8	Acid......	131.2	20.4	84.5
19	....																					
20	64.7	1,035	1.025	13.8	11.7	.66	.24	.21	.67	.07	.46	.927	.755	.051	.121	1.01	45	10.7	...do.......	273.5	49.5	81.9
21	66.1																			119.0	11.1	90.7
22	*66.5	1,125	1.024	14.4	12.3	.75	.24	.20	.61	.12	.38	1.092	.849	.063	.180	1.32	....	11.7	...do.......	117.0	25.2	78.5
23	65.8																			144.5	27.9	80.6
24	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	156.3	30.3	80.6

Nitrogen in excreta:	*Grams.*
Urine............	95.2
Feces............	9.5
	104.7

Daily results on urine and feces—Continued.

No. VI. LOW BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
July 24	66.1																					
25	66.1	950	1.027	13.9	11.7	0.61	0.26	0.21	0.50	0.10	0.72	1.129	0.904	0.070	0.155	1.19	....	10.3	Acid....	87.6	19.2	78.1
26	....																			....	....	....
27	66.2	840	1.028	12.9	10.4	.70	.29	.24	.63	.13	.75	.893	.702	.069	.122	.96	Slight.	10.9	...do.....	244.0	49.5	79.7
28	66.1																			184.0	26.1	85.8
29	65.7	910	1.027	11.5	9.1	.72	.25	.19	.53	.13	.77	.863	.692	.047	.124	1.14	40	10.6	...do.....	174.3	29.1	83.3
30	66.1																			145.8	28.8	80.3
31	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	79.7	21.3	73.3

Nitrogen in excreta:	*Grams.*
Urine	90.5
Feces	10.8
	101.3

No. VII. LOW BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
July 31	65.3																					
Aug. 1	65.7	908	1.027	13.6	11.4	0.57	0.22	0.19	0.44	0.08	0.89	0.995	0.807	0.067	0.121	1.04	80	8.83	Acid	121.0	21.0	82.6
2	65.7																			81.5	18.9	76.8
3	65.7	1,205	1.023	13.4	11.0	.58	.24	.20	.61	.08	.89	1.000	.791	.076	.133	1.32	50	11.1	...do	74.8	18.2	75.7
4	65.7																			253.0	39.9	84.2
5	65.7	1,090	1.024	12.3	10.2	.48	.30	.23	.60	.09	.64	.909	.737	.056	.116	1.16	60	11.1	...do	170.2	31.7	81.3
6	65.7																			166.5	34.7	79.1
7	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	152.5	34.7	77.3

BALANCES.

		Grams.
Nitrogen in food		101.3
Nitrogen in excreta:		
Urine	92.2	
Feces	10.0	
		102.2
Balance		−0.9

	Grams.
Ether extract in food	590.5
Ether extract in feces	43.8
Balance	546.7

Daily results on urine and feces—Continued.

No. VIII. LOW BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 7	65.4																			......	......	......
8	65.8	1,615	1.024	12.8	10.4	0.57	0.27	0.24	0.43	0.10	1.03	0.951	0.715	0.068	0.168	1.15	35	9.42	Acid......	116.5	20.0	82.9
9	......																			177.0	29.2	83.5
10	65.8	1,375	1.022	13.8	11.3	.54	.20	.17	.61	.09	1.06	1.049	.805	.058	.186	1.22	....	13.7	...do......	148.5	35.6	76.1
11	66.6																			239.2	38.7	83.8
12	66.1	1,235	1.021	12.1	9.90	.38	.27	.22	.66	.08	.81	.949	.750	.051	.148	1.26	....	10.4	...do......	147.3	29.6	80.0
13	66.1																			131.0	24.9	81.0
14	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	217.0	47.1	78.2

Nitrogen in excreta:	*Grams.*
Urine	90.2
Feces	12.4
	102.6

No. IX. LOW BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol. = 100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 14	64.9																			......	......	......
15	65.8	1,010	1.026	12.8	11.0	0.36	0.25	0.21	0.69	0.09	0.41	1.020	0.835	0.061	0.124	1.13	....	10.9	Sl. acid...	105.5	16.4	84.5
16	....																			253.2	39.6	84.4
17	65.8	1,190	1.026	15.0	12.4	.49	.30	.25	.56	.10	1.15	.990	.804	.042	.144	1.24	....	11.9	...do......	168.2	34.3	79.6
18	66.9																			134.0	26.1	80.6
19	66.5	1,150	1.031	15.2	12.6	.47	.29	.26	.62	.08	1.33	1.135	.960	.032	.143	1.30	35	10.9	Acid......	177.0	39.0	77.9
20	65.8																			200.3	37.2	81.4
21	....	....	....	....	......	......	......	......	......	......	......	......	......	......	......	......	....	....	....	165.5	36.9	77.7

Nitrogen in excreta:	*Grams.*
Urine	98.8
Feces	13.4
	112.2

Daily results on urine and feces—Continued.

No. X. LOW BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Aug. 21	66.1																			....	....	....
22	....	1,013	1.026	14.6	12.1	0.55	0.27	0.23	0.60	0.08	1.0	1.15	0.836	0.045	0.269	1.18	35	9.46	Acid	195.0	27.6	85.8
23	66.1																			....	....	....
24	....																			150.2	40.1	73.4
25	65.8	1,120	1.025	15.8	13.3	.54	.28	.24	.64	.09	.95	1.072	.873	.060	.139	1.26	35	13.1	...do	109.3	21.6	80.2
26	66.3	1,415	1.023	16.4	13.3	.56	.28	.24	.66	.09	1.51	1.176	.953	.050	.173	1.34	65	12.7	...do	151.2	30.6	79.8
27	65.7																			170.2	32.7	81.3
28	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	146.4	33.6	77.0

BALANCES.

		Grams.
Nitrogen in food		89.1
Nitrogen in excreta:		
Urine	108.2	
Feces	10.0	
		118.2
Balance		−29.1

	Grams.
Ether extract in food	522.5
Ether extract in feces	28.8
Balance	493.7

No. XI. HIGH BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Sept. 2	....																			....	....	....
3	66.6	1,280	1.024	13.3	11.2	0.45	0.23	0.20	0.73	0.11	0.58	0.998	0.812	0.042	0.144	1.24	50	13.1	Acid......	211.7	47.4	78.1
4	66.5																			188.5	37.8	79.9
5	66.5	1,430	1.021	15.0	12.7	.53	.31	.26	.63	.12	.72	1.156	.930	.042	.184	1.11	45	10.6	Sl. acid ...	158.7	25.1	84.2
6	....																			....	....	....
7	....																			343.8	72.0	79
8	66.3	1,140	1.025	15.0	12.7	.63	.27	.22	.66	.10	.64	1.246	.954	.086	.206	1.39	45	10.6	Acid......	110.1	29.9	72.8
9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	190.7	40.9	78.6

Nitrogen in excreta:	*Grams.*
Urine	101.6
Feces	14.2
	115.8

Daily results on urine and feces—Continued.

No. XII. HIGH BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 9	66.9	905	1.026	9.85	8.5	0.29	0.20	0.18	0.47	0.14	0.25	0.755	0.568	0.045	0.142	0.86	70	6.79	Acid	......	......	......
10	66.9																			145.7	31.7	78.1
11	67.2	1,263	1.027	15.2	13.0	.48	.30	.26	.69	.17	.56	1.146	.929	.072	.145	1.34	70	8.66	...do	131.2	29.9	77.2
12	66.6																			94.5	18.5	80.5
13	66.6																			203.7	39.9	80.4
14	66.6	1,140	1.029	15.1	12.8	.54	.24	.21	.61	.16	.75	1.184	.930	.086	.168	1.35	70	6.55	...do	......	......	......
15	66.1																			376.0	68.4	81.8

Nitrogen in excreta:	*Grams.*
Urine	95.5
Feces	10.6
	106.1

No. XIII. HIGH BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gms.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Sept. 16	66.1	1,325	1.027	17.7	14.9	0.58	0.31	0.28	0.62	0.18	1.11	1.317	1.080	0.050	0.187	1.56	85	15.3	Acid	......	......	......
17	66.3																			100.5	19.1	81.0
18	66.6	1,000	1.026	14.6	12.3	.57	.24	.21	.64	.22	.63	1.090	.853	.062	.175	1.13	75	10.0	do.	170.6	30.2	82.4
19	66.1																			119.0	25.2	78.8
20	......																			97.5	24.0	75.4
21	66.1	1,355	1.023	15.1	12.9	.52	.28	.24	.82	.24	.34	1.071	.849	.047	.175	1.42	60	13.3	do.	137.3	18.0	86.9
22	67.2																			107.3	20.3	81.1
23	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	194.3	36.0	81.5

BALANCES.

		Grams.
Nitrogen in food		114.7
Nitrogen in excreta:		
Urine	109.4	
Feces	9.9	
		119.3
Balance		−4.6

	Grams.
Ether extract in food	717.5
Ether extract in feces	29.9
Balance	687.6

Daily results on urine and feces—Continued.

No. XIV. HIGH BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Sept. 23	66.3																			....	....	....
24	66.1	1,365	1.023	15.3	12.6	0.52	0.28	0.24	0.81	0.26	0.83	1.048	0.853	0.045	0.150	1.30	55	12.0	Acid......	165.0	28.4	82.8
25	66.1																			96.8	20.4	79.0
26	65.8	1,416	1.020	13.3	11.4	.53	.25	.21	.74	.32	.07	1.006	.784	.053	.169	1.08	70	11.2	...do......	163.5	30.8	81.2
27	....																			119.3	17.4	85.4
28	66.3	1,780	1.020	17.6	14.6	.54	.42	.36	.96	.44	.64	1.240	1.034	.042	.164	1.56	40	17.2	...do......	105.5	26.7	74.9
29	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	263.0	34.3	86.9

Nitrogen in excreta:	*Grams.*
Urine	88.1
Feces	10.4
	98.5

No. XV. HIGH BENZOATE PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Sept. 29	66.5	1,160	1.027	14.3	11.2	0.60	0.27	0.23	0.70	0.66	0.87	1.068	0.887	0.058	0.123	1.38	50	13.5	Acid	......	......	......
30	66.5	1,500	1.023	18.2	14.9	.61	.29	.25	.65	.67	1.08	1.210	.973	.091	.146	1.48	80	13.4	do	78.3	14.3	81.8
Oct. 1	66.3	1,590	1.022	15.4	12.8	.40	.27	.23	.67	.62	.64	1.071	.841	.036	.194	1.28	45	13.9	do	173.4	33.2	80.8
2	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	104.4	19.5	81.3

BALANCES.

		Grams.
Nitrogen in food		55.9
Nitrogen in excreta:		
Urine	47.9	
Feces	3.9	
		51.8
Balance		+4.1

	Grams.
Ether extract in food	508.5
Ether extract in feces	18.3
Balance	490.2

Daily results on urine and feces—Continued.

No. XVI. AFTER PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																	Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 2	66.3	1,810	1.019	15.2	12.9	0.49	0.28	0.24	0.64	0.19	0.70	1.177	0.943	0.054	0.180	1.22	15	15.2	Acid	198.0	31.2	84.2
3	66.3	1,315	1.021	12.4	10.0	.52	.25	.21	.71	.18	.74	.855	.668	.054	.133	1.02	50	15.0	do	199.0	32.3	83.8
4	....																					
5	66.3	1,120	1.023	13.0	10.7	.58	.25	.21	.68	.11	.68	.882	.690	.056	.136	.95	Trace.	12.7	do	186.6	40.8	78.1
6	66.3																			120.0	30.9	74.2
7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....			

Nitrogen in excreta:	*Grams.*
Urine	66.0
Feces	8.2
	74.2

No. XVII. AFTER PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine.																		Feces.		
		Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Weight. Moist.	Weight. Air dry.	Water.
	Kilos.	c. c.		Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gm.	Gm.	Gm.	Gms.		Gms.		Gms.	Gms.	P. ct.
Oct. 7	66.6	1,400	1.021	14.6	12.2	0.55	0.26	0.21	0.76	0.07	0.76	1.040	0.856	0.048	0.136	1.06	55	12.3	Acid	......	......	......
8	66.5																			136.5	26.4	80.7
9	66.8																			70.2	13.8	80.4
10	66.5	1.160	1.024	13.6	11.5	.42	.24	.21	.70	.08	.66	.948	.780	.037	.131	1.14	65	9.4	...do	220.0	39.9	81.8
11	66.3																			......	......	......
12	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	155.8	42.5	72.7

BALANCES.

		Grams.
Nitrogen in food		83.7
Nitrogen in excreta:		
Urine	70.0	
Feces	6.6	
		76.6
Balance		+7.1

	Grams.
Ether extract in food	469.3
Ether extract in feces	20.5
Balance	448.8

Daily results on urine and feces—Continued.

No. XVIII.

AFTER PERIOD. SUBJECT IV L.

Date.	Body weight.	Urine. Volume.	Specific gravity.	Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purine nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Indican (Fehling's Sol.=100).	Chlorine as NaCl.	Reaction.	Feces. Weight. Moist.	Feces. Weight. Air dry.	Feces. Water.
	Kilos.	*c. c.*		*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*		*Gms.*		*Gms.*	*Gms.*	*P. ct.*
Oct. 12	66.5	} 1,250	1.024	14.0	12.0	0.50	0.22	0.18	0.63	0.07	0.59	0.908	0.715	0.059	0.134	1.13	60	9.43	Acid......	......	......	......
13	66.5																			97.5	18.3	81.2
14	66.5	} 1,100	1.029	13.2	10.7	.76	.27	.23	.54	.07	.86	1.123	.934	.036	.153	1.14	40	12.6	...do......	119.0	26.1	78.1
15	66.5																			125.5	27.8	77.9
16	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	291.0	28.8	90.1

Nitrogen in excreta:	*Grams.*
Urine............	54.4
Feces............	5.8
	60.2

SERIES B.

Daily averages of nitrogen, sulphur, etc., in urine and feces.

SUBJECT I R.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	Urine. Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinin nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Chlorine as sodium chloride.	Feces. Weight, fresh.	Weight, dried.	Water.
			Gms.	Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gm.	Gms.	Gms.	Gms.	Gms.	P. ct.
I	June 15-22	8	0	10. 2	8. 53	0. 42	0. 20	0. 17	0. 41	0. 06	0. 57	0. 745	0. 597	0. 032	0. 116	0. 81	9. 31	117. 8	30. 0	74. 5
II	June 23-28	6	0	9. 08	7. 57	. 37	. 16	. 13	. 43	. 05	. 51	. 671	. 516	. 033	. 124	. 87	8. 19	153. 4	32. 5	78. 8
	Average			9. 64	8. 05	. 40	. 18	. 15	. 42	. 06	. 53	. 710	. 557	. 033	. 120	. 84	8. 75	135. 6	31. 3	76. 9
III	July 3-9	7	. 3	10. 0	8. 0	. 47	. 18	. 16	. 47	. 08	. 81	. 751	. 592	. 036	. 123	. 99	8. 68	143. 3	34. 6	75. 9
IV	July 10-16	7	. 3	12. 0	9. 96	. 54	. 21	. 18	. 42	. 09	. 78	. 892	. 706	. 044	. 142	. 97	9. 7	179. 0	32. 6	81. 8
V	July 17-23	7	. 3	11. 0	9. 09	. 45	. 21	. 19	. 46	. 11	. 68	. 789	. 634	. 033	. 122	. 90	11. 0	162. 7	29. 6	81. 8
VI	July 24-30	7	. 3	9. 46	7. 82	. 47	. 19	. 17	. 46	. 10	. 42	. 740	. 575	. 045	. 120	. 81	10. 5	119. 1	24. 5	79. 5
VII	July 31-Aug. 6	7	. 3	9. 93	8. 20	. 37	. 21	. 17	. 46	. 09	. 60	. 738	. 593	. 031	. 114	. 91	10. 1	137. 4	26. 2	81. 0
VIII	Aug. 7-13	7	. 3	11. 2	9. 18	. 40	. 22	. 19	. 43	. 07	. 90	. 841	. 653	. 039	. 149	. 94	10. 3	138. 4	25. 1	81. 7
IX	Aug. 14-20	7	. 3	11. 0	9. 18	. 39	. 21	. 18	. 46	. 09	. 67	. 834	. 678	. 042	. 114	1. 15	9. 52	114. 4	27. 0	76. 4
X	Aug. 21-27	7	. 3	12. 4	10. 1	. 42	. 25	. 20	. 49	. 10	1. 05	. 873	. 688	. 047	. 138	. 99	10. 8	80. 3	16. 2	79. 8
	Average			10. 9	8. 94	. 44	. 21	. 18	. 46	. 09	. 76	. 807	. 640	. 040	. 127	. 96	10. 1	134. 3	27. 0	79. 9
XI	Sept. 2-8	7	. 6	11. 8	10. 1	. 56	. 23	. 20	. 40	. 11	. 40	. 863	. 699	. 032	. 132	. 95	11. 7	171. 3	24. 3	85. 8
XII	Sept. 9-15	7	1. 0	12. 7	10. 8	. 52	. 22	. 19	. 51	. 16	. 49	. 989	. 793	. 041	. 155	1. 09	13. 0	103. 6	21. 8	79. 0
XIII	Sept. 16-22	7	1. 5	12. 1	10. 1	. 51	. 21	. 19	. 46	. 22	. 60	. 931	. 733	. 039	. 159	1. 19	15. 3	132. 2	27. 6	79. 1
XIV	Sept. 23-28	6	(a)	11. 9	9. 99	. 44	. 23	. 20	. 55	. 31	. 38	. 888	. 711	. 040	. 137	1. 37	14. 3	75. 6	20. 6	72. 7
XV	Sept. 29-Oct. 1	3	6. 0	15. 4	12. 9	. 47	. 27	. 22	. 55	. 60	. 61	1. 065	. 884	. 031	. 147	1. 43	14. 3	139. 1	31. 6	77. 3
	Average			12. 8	10. 8	. 50	. 23	. 20	. 49	. 28	. 50	. 947	. 764	. 037	. 146	1. 21	13. 7	120. 4	24. 9	79. 1
XVI	Oct. 2-6	5	0	13. 3	11. 5	. 49	. 27	. 22	. 48	. 11	. 45	. 935	. 752	. 038	. 145	1. 28	13. 7	87. 9	22. 5	74. 4
XVII	Oct. 7-11	5	0	10. 4	8. 72	. 32	. 22	. 17	. 48	. 06	. 60	. 724	. 611	. 036	. 077	1. 33	10. 3	90. 8	21. 5	76. 3
XVIII	Oct. 12-15	4	0	13. 2	11. 0	. 53	. 23	. 19	. 45	. 04	. 95	. 789	. 629	. 054	. 106	1. 06	11. 0	82. 5	23. 6	71. 4
	Average			12. 3	10. 4	. 45	. 24	. 19	. 47	. 07	. 67	. 816	. 664	. 043	. 109	1. 22	11. 5	87. 1	22. 5	74. 2

a 4 days=2.5; 2 days=3.

Daily averages of nitrogen, sulphur, etc., in urine and feces—Continued.

SUBJECT II H.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	Urine. Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinin nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Chlorine as sodium chloride.	Feces. Weight, fresh.	Weight, dried.	Water.
			Gms.	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*P. ct.*
I	June 16-23	8	0	15.05	12.15	0.80	0.35	0.32	0.52	0.08	1.15	1.064	0.880	0.060	0.124	1.15	9.98	90.6	23.3	74.3
II	June 24-29	6	0	12.7	10.24	.84	.29	.26	.66	.08	.59	.941	.727	.043	.171	1.09	10.5	157.5	23.9	84.8
	Average	......	......	13.88	11.20	.82	.32	.29	.59	.08	.87	1.003	.804	.052	.147	1.12	10.2	124.1	23.6	81.0
III	July 3-9	7	.45	12.91	10.34	.79	.29	.27	.68	.10	.71	.998	.755	.056	.187	1.10	12.4	131.1	32.4	75.3
IV	July 10-16	7	.45	13.86	11.23	.78	.29	.26	.66	.12	.78	1.090	.820	.047	.223	1.20	14.4	203.0	33.9	83.3
V	July 17-23	7	.45	13.69	11.19	.74	.31	.26	.61	.13	.71	1.013	.800	.053	.160	1.24	10.0	150.5	26.8	82.3
VI	July 24-30	7	.45	13.4	10.81	.75	.33	.29	.66	.12	.73	1.045	.803	.064	.178	1.10	12.8	106.8	26.4	75.3
VII	July 31-Aug. 6	7	.45	13.87	11.13	.80	.29	.24	.66	.15	.84	1.035	.823	.072	.140	1.21	13.6	149.4	25.7	82.8
VIII	Aug. 7-13	7	.45	14.[illegible]3	11.2	.75	.31	.27	.65	.09	1.13	1.038	.815	.071	.152	1.14	13.2	95.9	27.2	71.6
IX	Aug. 14-20	7	.45	15.36	12.7	.79	.32	.29	.76	.10	.69	1.103	.895	.052	.158	1.29	12.9	134.5	24.0	82.2
X	Aug. 21-27	7	.45	13.04	10.53	.68	.30	.24	.72	.13	.68	.930	.746	.048	.136	1.03	12.1	81.4	21.0	74.2
	Average	......	......	13.78	11.14	.76	.31	.27	.67	.12	.78	1.032	.807	.058	.167	1.16	12.7	131.6	27.2	79.3
XI	Sept. 2-8	7	.6	14.23	11.59	.84	.31	.26	.74	.13	.62	1.034	.810	.060	.164	1.32	15.3	105.3	25.9	75.5
XII	Sept. 9-15	7	1.0	17.16	14.31	.95	.35	.31	.87	.17	.51	1.326	1.021	.089	.216	1.41	8.97	92.1	23.9	74.0
XIII	Sept. 16-22	7	1.5	15.51	12.34	.89	.32	.29	.83	.21	.92	1.116	.945	.055	.116	1.20	15.3	119.4	25.5	78.6
XIV	Sept. 23-28	6	(*a*)	15.58	12.6	.87	.35	.31	.73	.36	.67	1.173	.958	.062	.153	1.37	14.3	178.7	38.4	78.5
XV	Sept. 29-Oct. 1	3	6	17.7	14.03	.84	.35	.30	.85	.65	.98	1.214	.993	.048	.173	1.43	14.3	110.1	26.1	76.4
	Average	......	......	16.04	12.97	.88	.34	.29	.80	.30	.75	1.173	.945	.063	.165	1.35	13.6	121.1	28.0	76.9
XVI	Oct. 2-6	5	0	16.08	13.06	.83	.35	.30	.80	.14	.90	1.182	.946	.061	.175	1.28	13.1	132.0	31.8	75.9
XVII	Oct. 7-11	5	0	16.02	13.18	.81	.33	.28	.82	.05	.83	1.139	.941	.039	.159	1.33	10.3	112.6	24.5	78.3
XVIII	Oct. 12-14	3	0	15.47	12.6	.93	.30	.26	.74	.06	.84	1.016	.818	.057	.141	1.17	13.3	105.6	19.7	81.3
	Average	......	......	15.86	12.95	.86	.33	.28	.79	.08	.85	1.112	.902	.052	.158	1.26	12.2	116.7	25.3	78.3

a 4 days=2.5; 2 days=3.

SUBJECT III O.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	Urine. Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinin nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorous.	Chlorine as sodium chloride.	Feces. Weight, fresh.	Weight, dried.	Water.
			Gms.	Gms.	Gms.	Gms.	Gm.	Gm.	Gm.	Gm.	Gms.	Gms.	Gm.	Gm.	Gm.	Gms.	Gms.	Gms.	Gms.	P. ct.
I	May 27-June 5	10	0	13. 15	....	0. 85	0. 24	0. 16	0. 45	....	....	0. 955	0. 736	0. 073	0. 146	0. 90	12. 1	100. 5	19. 9	78. 2
IA	June 6-17	12	0	12. 72	9. 77	. 98	. 25	. 18	. 42	0. 07	1. 23	. 972	. 730	. 076	. 166	. 94	12. 1	81. 8	17. 4	78. 8
II	June 18-25	8	0	12. 8	10. 57	. 87	. 29	. 22	. 47	. 07	. 53	. 917	. 721	. 060	. 136	. 90	11. 0	119. 5	20. 8	82. 6
	Average	......	......	12. 89	10. 17	. 90	. 26	. 19	. 45	. 07	. 88	. 969	. 729	. 070	. 149	. 91	11. 7	100. 6	19. 4	80. 7
III	June 29-July 5	7	. 6	13. 77	11. 06	. 96	. 28	. 23	. 53	. 16	. 78	1. 017	. 780	. 074	. 163	. 90	14. 4	115. 2	20. 4	82. 3
IIIA	July 6-9	4	. 45	15. 65	12. 95	1. 06	. 26	. 21	. 55	. 17	. 66	1. 182	. 912	. 066	. 203	1. 10	14. 8	111. 2	23. 8	78. 6
IV	July 10-16	7	. 45	15. 13	12. 61	. 94	. 25	. 20	. 48	. 15	. 70	1. 102	. 854	. 076	. 172	1. 05	9. 64	125. 1	23. 8	81. 0
V	July 17-23	7	. 45	14. 06	11. 64	. 84	. 20	. 16	. 58	. 14	. 66	1. 039	. 817	. 086	. 136	1. 05	12. 8	142. 9	25. 0	82. 5
VI	July 24-30	7	. 45	14. 46	11. 7	. 95	. 25	. 21	. 49	. 16	. 91	1. 025	. 812	. 087	. 126	1. 01	15. 1	190. 4	27. 2	85. 7
VII	July 31-Aug. 6	7	. 45	13. 63	10. 86	. 89	. 22	. 18	. 51	. 13	1. 02	1. 024	. 816	. 067	. 141	1. 08	13. 1	179. 4	28. 8	84. 0
VIII	Aug. 7-13	7	. 45	14. 94	12. 11	. 88	. 27	. 23	. 57	. 15	. 96	1. 106	. 906	. 072	. 128	1. 18	12. 8	157. 7	27. 8	83. 4
IX	Aug. 14-20	7	. 45	13. 6	11. 4	. 78	. 23	. 18	. 54	. 12	. 53	. 960	. 776	. 084	. 100	1. 03	13. 0	133. 8	27. 2	79. 6
X	Aug. 21-27	7	. 45	15. 3	12. 61	. 80	. 24	. 18	. 53	. 13	. 99	1. 083	. 890	. 065	. 128	1. 09	15. 6	133. 4	26. 4	80. 2
	Average	......	......	14. 5	11. 88	. 90	. 24	. 20	. 53	. 15	. 80	1. 060	. 840	. 075	. 145	1. 05	13. 5	143. 2	25. 6	82. 1
XI	Sept. 2-8	7	. 6	14. 39	12. 27	. 52	. 25	. 20	. 57	. 16	. 62	1. 008	. 781	. 084	. 143	1. 10	13. 4	149. 9	26. 3	82. 5
XII	Sept. 9-15	7	1. 0	15. 31	12. 94	. 81	. 27	. 22	. 56	. 18	. 55	1. 104	. 869	. 075	. 160	. 97	16. 1	122. 6	22. 2	81. 8
XIII	Sept. 16-22	7	1. 5	16. 57	13. 73	. 89	. 28	. 23	. 61	. 26	. 80	1. 153	. 922	. 070	. 160	1. 11	12. 4	136. 8	28. 6	79. 1
XIV	Sept. 23-28	6	(a)	13. 73	11. 0	. 73	. 24	. 19	. 61	. 41	. 71	. 955	. 755	. 053	. 147	. 99	14. 3	137. 4	24. 9	81. 2
XV	Sept. 29-Oct. 1	3	6. 0	14. 73	11. 88	. 77	. 24	. 18	. 59	. 65	. 60	. 998	. 798	. 083	. 117	1. 05	16. 7	95. 4	22. 5	76. 4
	Average	......	......	14. 95	12. 36	. 74	. 26	. 20	. 59	. 33	. 67	1. 044	. 825	. 073	. 146	1. 04	14. 6	128. 4	24. 9	80. 6
XVI	Oct. 2-6	5	0	12. 96	10. 61	. 66	. 24	. 18	. 60	. 14	. 71	. 877	. 684	. 082	. 111	1. 03	14. 8	110. 4	21. 8	80. 2
XVII	Oct. 7-11	5	0	14. 84	12. 04	. 85	. 24	. 19	. 61	. 10	1. 00	1. 092	. 864	. 069	. 159	1. 00	9. 8	151. 5	26. 0	82. 8
XVIII	Oct. 12-15	4	0	15. 05	12. 3	. 96	. 27	. 21	. 57	. 07	. 88	1. 039	. 848	. 108	. 083	0. 98	14. 1	114. 4	21. 4	81. 3
	Average	......	......	14. 28	11. 65	. 82	. 25	. 19	. 59	. 10	. 87	1. 003	. 799	. 086	. 118	1. 00	12. 9	125. 4	23. 1	81. 5

a 4 days=2.5; 2 days=3.

Daily averages of nitrogen, sulphur, etc., in urine and feces—Continued.

SUBJECT IV L.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	Urine.														Feces.		
				Total nitrogen.	Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinin nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Total sulphur.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Phosphate phosphorus.	Chlorine as sodium chloride.	Weight, fresh.	Weight, dried.	Water.
			Gms.	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gm.*	*Gm.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*P. ct.*
I	June 14–20	7	0	17.3	15.1	0.82	0.26	0.22	0.44	0.07	0.62	1.356	1.082	0.064	0.210	1.63	13.0	220.3	37.4	83.0
II	June 21–27	7	0	15.8	13.5	.57	.29	.23	.48	.07	.89	1.151	.989	.041	.121	1.39	10.3	203.5	31.5	84.5
	Average	......	......	16.55	14.3	.70	.28	.22	.46	.07	.76	1.253	1.035	.053	.165	1.51	11.6	211.9	34.4	83.7
III	July 3–9	7	.3	13.6	11.2	.70	.25	.21	.63	.10	.72	1.043	.828	.059	.156	1.27	11.3	170.3	31.8	81.3
IV	July 10–16	7	.3	13.2	11.0	.60	.25	.21	.55	.09	.71	1.024	.815	.050	.159	1.26	11.7	175.8	31.1	82.4
V	July 17–23	7	.3	13.6	11.4	.69	.24	.20	.64	.08	.55	1.012	.811	.043	.158	1.15	11.5	134.5	23.5	82.5
VI	July 24–30	7	.3	12.9	10.6	.67	.27	.21	.55	.12	.69	.986	.786	.062	.138	1.11	10.6	130.8	25.0	80.9
VII	July 31–Aug. 6	7	.3	13.2	10.9	.55	.25	.20	.53	.08	.89	.972	.782	.065	.125	1.15	10.1	145.6	28.4	80.5
VIII	Aug. 7–13	7	.3	12.9	10.5	.51	.25	.21	.55	.09	1.00	.978	.751	.060	.167	1.20	10.9	168.1	32.2	80.9
IX	Aug. 14–20	7	.3	14.1	11.9	.43	.28	.24	.63	.09	.77	1.044	.862	.047	.135	1.21	11.2	177.0	32.8	81.5
X	Aug. 21–27	7	.3	15.5	12.8	.55	.28	.24	.63	.09	1.15	1.135	.880	.051	.204	1.25	11.4	131.8	26.6	79.8
	Average	......	......	13.63	11.28	.59	.26	.22	.59	.09	.82	1.024	.814	.055	.155	1.20	11.1	154.2	28.9	81.3
XI	Sept. 2–8	7	.6	14.5	12.3	.54	.27	.23	.67	.11	.61	1.137	.903	.055	.179	1.23	11.3	176.9	36.2	79.5
XII	Sept. 9–15	7	1.0	13.6	11.7	.44	.25	.22	.60	.16	.45	1.045	.826	.068	.151	1.21	7.52	135.9	26.9	80.0
XIII	Sept. 16–22	7	1.5	15.6	13.2	.56	.27	.24	.69	.21	.67	1.149	.917	.054	.178	1.34	12.5	132.4	24.7	81.4
XIV	Sept. 23–28	6	(a)	14.7	12.3	.53	.29	.24	.80	.32	.46	1.059	.848	.049	.162	1.23	12.5	130.4	22.6	82.7
XV	Sept. 29–Oct. 1	3	6.0	16.0	13.0	.54	.28	.24	.67	.65	.86	1.116	.900	.062	.154	1.38	13.6	118.7	22.3	81.2
	Average	......	......	14.9	12.5	.52	.27	.23	.69	.29	.63	1.101	.879	.058	.164	1.28	11.5	138.9	26.5	81.7
XVI	Oct. 2–6	5	0	13.2	10.9	.54	.26	.22	.68	.15	.67	.930	.732	.055	.143	1.03	14.1	140.7	27.0	80.8
XVII	Oct. 7–11	5	0	14.0	11.8	.47	.25	.21	.72	.08	.68	.985	.810	.041	.134	1.11	10.6	116.5	24.5	79.0
XVIII	Oct. 12–15	4	0	13.6	11.4	.63	.24	.20	.59	.07	.67	1.015	.824	.048	.143	1.14	11.0	158.2	25.3	83.8
	Average	......	......	13.6	11.37	.55	.25	.21	.66	.10	.67	.977	.789	.048	.140	1.09	11.9	138.5	25.6	81.2

a 4 days=2.5; 2 days=3.

SERIES C.

Percentages, nitrogen and sulphur in urine.

SUBJECT I R.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	In per cent of total nitrogen.							In per cent of total sulphur.			Ratio inorganic sulphur to ethereal sulphur.
				Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinin nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	
			Grams.											
	June 15–16	2	0	86.2	3.5	1.7	1.4	3.6	0.6	[illegible]	76.6	4.5	18.9	16.8
I	June 17–18	2	0	87.3	4.5	2.5	2.1	4.0	.5	1.2	86.1	3.0	10.5	28.8
	June 19–20	2	0	80.9	4.2	1.9	1.6	4.0	.6	8.4	82.6	2.9	14.5	28.8
	June 21–22	2	0	80.8	4.4	1.8	1.3	4.7	.7	7.6	73.8	7.5	18.7	9.9
	June 23–24	2	0	86.4	4.0	1.3	1.1	4.6	.6	3.0	74.5	7.2	18.3	9.4
II	June 25–26	2	0	78.4	3.9	2.1	1.7	5.1	.5	10.0	79.2	3.5	17.3	21.2
	June 27–28	2	0	85.3	4.2	1.8	1.6	4.6	.6	[illegible]	76.3	3.9	19.8	19.5
	July 3–5	3	.3	78.4	6.4	1.9	1.6	4.7	.9	7.7	80.4	5.2	14.4	15.4
III	July 6–7	2	.3	78.5	4.2	1.8	1.4	4.4	.8	10.3	78.7	5.6	15.7	13.9
	July 8–9	2	.3	82.7	3.1	1.9	1.8	4.9	.6	6.8	77.3	3.8	18.9	20.6
	July 10–12	3	.3	84.6	3.7	1.9	1.7	3.3	.7	5.8	78.4	6.2	15.4	12.7
IV	July 13–14	2	.3	76.8	6.7	1.8	1.6	3.9	.5	10.2	79.5	3.4	17.1	12.6
	July 15–16	2	.3	86.5	3.8	1.5	1.3	3.5	.8	3.9	80.2	4.2	15.6	12.5
	July 17–19	3	.3	83.2	4.3	2.0	1.7	4.5	1.2	4.8	83.3	4.1	12.6	20.2
V	July 20–21	2	.3	83.8	4.2	1.7	1.5	[illegible]	.8	6.0	80.3	4.1	15.6	20.0
	July 22–23	2	.3	80.9	3.5	1.9	1.8	4.3	1.0	8.3	76.3	4.6	19.1	16.4
	July 24–26	3	.3	83.2	4.4	2.1	1.9	4.7	1.0	4.6	79.0	5.9	15.1	13.3
VI	July 27–28	2	.3	81.9	7.4	2.1	1.9	[illegible]	1.1	2.9	77.3	6.7	16.0	11.4
	July 29–30	2	.3	82.7	3.2	1.9	1.7	[illegible]	1.2	5.5	75.4	5.8	18.8	13.0
	July 31–Aug. 2	3	.3	82.7	3.6	2.2	1.8	4.9	1.0	5.7	79.2	4.6	16.2	17.0
VII	Aug. 3–4	2	.3	80.8	4.4	2.1	1.7	4.3	.8	7.6	79.7	3.1	17.2	25.2
	Aug. 5–6	2	.3	84.7	3.4	2.2	1.6	4.7	.7	4.3	82.6	4.8	12.6	17.1
	Aug. 7–9	3	.3	80.9	4.0	1.9	1.8	3.9	.5	8.8	75.4	5.4	19.2	14.0
VIII	Aug. 10–11	2	.3	81.7	3.8	1.9	1.6	3.8	.6	8.2	79.3	4.0	16.7	19.7
	Aug. 12–13	2	.3	84.6	2.9	2.0	1.8	3.9	.7	5.9	79.7	4.3	16.0	18.6
	Aug. 14–16	3	.3	85.8	2.9	1.9	1.5	4.3	.9	4.2	84.6	5.3	10.1	15.9
IX	Aug. 17–18	2	.3	78.6	5.0	1.8	1.6	3.7	.7	10.2	76.4	5.0	18.6	15.4
	Aug. 19–20	2	.3	83.6	3.0	2.0	1.7	4.3	.9	6.2	80.8	4.6	14.6	17.5
	Aug. 21–23	3	.3	80.6	3.0	2.3	1.8	4.0	.9	9.2	80.5	5.0	14.5	16.2
X	Aug. 24–25	2	.3	82.5	3.9	1.9	1.4	3.7	.8	6.2	80.0	5.9	14.1	13.4
	Aug. 26–27	2	.3	79.6	3.3	1.8	1.5	4.2	.7	10.4	75.0	5.5	19.5	13.8
	Sept. 2–3	2	.6	83.5	4.3	1.7	1.6	3.6	.9	6.0	80.1	4.2	15.7	19.1
XI	Sept. 4–6	3	.6	85.0	5.6	2.0	1.8	3.0	.8	5.6	82.5	4.2	13.3	19.5
	Sept. 7–8	2	.6	87.8	3.8	2.0	1.8	3.8	1.0	1.6	77.8	2.2	20.0	37.0
	Sept. 9–10	2	1.0	85.2	4.3	1.5	1.3	3.8	.8	4.4	80.5	3.5	16.0	22.8
XII	Sept. 11–13	3	1.0	85.8	3.7	1.8	1.6	4.2	1.5	3.0	80.8	5.4	13.8	15.0
	Sept. 14–15	2	1.0	83.8	4.3	1.9	1.6	4.3	1.4	4.3	79.3	3.3	17.4	23.8
	Sept. 16–17	2	1.5	83.4	3.4	2.0	1.8	3.6	1.9	5.7	78.8	4.4	16.8	17.9
XIII	Sept. 18–20	3	1.5	83.5	4.1	1.6	1.5	3.5	1.9	5.4	78.2	4.6	17.2	17.1
	Sept. 21–22	2	1.5	85.0	5.0	1.8	1.6	4.4	1.7	2.1	79.4	3.4	17.2	23.2
	Sept. 23–24	2	2.5	85.9	4.0	1.8	1.6	5.0	2.4	.9	77.3	6.5	16.2	11.9
XIV	Sept. 25–27	3	2.5 3.0	83.6	3.7	1.8	1.6	4.2	2.3	4.4	82.2	2.9	14.9	27.8
	Sept. 28	1	3.0	81.9	2.9	2.4	2.1	5.0	3.8	4.0	79.9	5.3	14.8	15.0
	Sept. 29	1	6.0	83.9	2.8	1.7	1.4	3.5	3.9	4.2	83.9	5.7	12.4	22.5
XV	Sept. 30	1	6.0	84.0	3.2	1.8	1.5	3.6	3.6	3.8	84.2	2.2	13.6	37.9
	Oct. 1	1	6.0	83.5	3.2	1.7	1.4	3.6	4.3	3.7	81.0	3.5	15.5	23.2
	Oct. 2	1	0	86.9	3.2	2.4	2.1	3.0	1.0	3.5	79.7	2.6	17.7	33.4
XVI	Oct. 3–4	2	0	85.5	4.0	1.9	1.5	3.8	.8	4.0	79.7	4.0	16.3	19.4
	Oct. 5–6	2	0	86.4	3.8	1.9	1.5	3.8	.8	3.3	81.4	5.0	13.6	16.3
XVII	Oct. 7–8	2	0	85.6	3.0	2.0	1.6	4.7	.4	4.3	86.2	4.6	9.2	18.8
	Oct. 9–11	3	0	82.9	3.1	2.2	1.7	4.6	.6	6.6	83.0	5.2	11.8	15.7
XVIII	Oct. 12–13	2	0	84.0	3.0	1.8	1.5	3.8	.3	7.1	81.0	7.3	11.7	11.1
	Oct. 14–15	2	0	82.9	4.9	1.7	1.4	3.1	.3	7.1	78.3	6.2	15.5	12.6

Percentages, nitrogen and sulphur in urine—Continued.

SUBJECT II H.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	In per cent of total nitrogen.							In per cent of total sulphur.			Ratio inorganic sulphur to ethereal sulphur.
				Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinin nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	
			Grams.											
I	June 16–17	2	0	80.8	4.8	2.3	2.1	3.2	0.6	8.3	79.5	4.6	15.9	17.3
	June 18–19	2	0	81.7	4.9	2.0	1.8	3.0	.5	7.9	87.8	5.6	6.6	15.7
	June 20–21	2	0	80.5	6.3	2.9	2.6	3.3	.5	6.5	82.3	9.2	8.5	9.0
	June 22–23	2	0	79.9	5.3	2.2	2.0	4.3	.5	7.8	81.6	3.7	14.7	22.0
II	June 24–25	2	0	82.0	5.2	2.3	2.1	5.0	.5	5.0	76.9	5.1	18.0	15.1
	June 26–27	2	0	78.9	7.4	2.2	2.0	4.6	.7	6.1	79.4	3.7	16.9	21.4
	June 28–29	2	0	80.7	7.7	2.3	2.0	6.2	.7	2.4	75.2	4.8	20.0	15.6
III	July 3–5	3	.45	79.0	7.3	2.2	2.0	5.2	.8	5.5	77.1	5.5	17.4	14.0
	July 6–7	2	.45	81.0	5.9	2.3	2.2	5.4	1.0	4.4	76.5	6.5	17.0	11.8
	July 8–9	2	.45	80.5	4.8	2.3	2.1	5.2	.7	6.5	73.0	4.8	22.2	15.2
IV	July 10–12	3	.45	80.0	6.0	1.8	1.6	5.3	.7	6.2	72.3	4.1	23.6	17.6
	July 13–14	2	.45	81.8	5.2	2.2	2.1	4.9	1.0	4.9	79.6	4.5	15.9	17.7
	July 15–16	2	.45	81.9	5.5	2.4	2.1	4.0	.9	5.3	75.8	4.6	19.6	16.4
V	July 17–19	3	.45	81.3	5.4	2.4	2.1	4.6	.9	5.4	79.0	3.9	17.1	20.2
	July 20–21	2	.45	81.5	5.4	2.1	1.9	3.8	1.0	6.2	80.1	5.9	14.0	13.6
	July 22–23	2	.45	83.3	5.5	2.3	1.8	5.1	1.1	2.7	77.7	6.6	15.7	11.8
VI	July 24–26	3	.45	82.6	5.5	2.5	2.3	4.6	.8	4.0	77.3	5.0	17.7	15.4
	July 27–28	2	.45	79.7	5.9	2.7	2.4	5.2	.9	5.6	78.3	7.4	14.3	10.6
	July 29–30	2	.45	78.9	5.2	2.3	2.0	5.0	1.0	7.6	74.9	6.5	18.6	12.2
VII	July 31–Aug. 1	2	.45	80.8	5.4	2.2	1.9	4.6	1.2	5.8	81.6	5.2	13.2	15.7
	Aug. 2–4	3	.45	78.5	6.1	2.0	1.8	4.7	1.2	7.5	76.8	8.8	14.4	8.8
	Aug. 5–6	2	.45	81.2	5.9	1.9	1.3	5.0	.9	5.1	79.1	7.3	13.6	10.8
VIII	Aug. 7–9	3	.45	80.0	5.7	2.8	2.0	4.6	.6	6.9	77.7	6.9	15.4	12.2
	Aug. 10–11	2	.45	76.3	5.2	2.2	2.0	5.1	.6	10.6	80.3	6.5	13.2	12.3
	Aug. 12–13	2	.45	81.0	4.5	2.0	1.7	4.4	.6	7.5	77.8	7.7	15.1	10.1
IX	Aug. 14–16	3	.45	84.5	5.0	2.1	1.9	5.1	.7	2.6	81.2	6.8	12.0	11.9
	Aug. 17–18	2	.45	81.2	5.8	2.1	1.8	4.9	.6	5.4	80.0	3.4	16.6	23.5
	Aug. 19–20	2	.45	81.4	4.9	2.1	1.9	4.8	.7	6.1	82.0	3.2	14.6	25.6
X	Aug. 21–23	3	.45	79.4	5.4	2.4	1.9	6.0	.9	5.9	79.4	5.3	15.3	15.0
	Aug. 24–25	2	.45	83.6	5.2	2.5	2.0	5.5	.9	2.3	80.2	4.8	15.0	16.7
	Aug. 26–27	2	.45	81.0	4.9	2.0	1.7	4.9	1.1	6.1	81.3	5.3	13.4	15.3
XI	Sept. 2–3	2	.6	79.9	5.0	2.3	2.0	6.7	1.1	5.0	76.7	6.2	17.1	12.3
	Sept. 4–6	3	.6	80.7	6.6	2.1	1.7	5.2	.8	4.6	78.1	5.5	16.4	14.2
	Sept. 7–8	2	.6	83.2	5.7	2.1	1.8	4.2	.9	3.9	79.7	5.9	14.4	13.5
XII	Sept. 9–10	2	1.0	87.2	4.0	2.0	1.8	4.7	.9	.3	74.2	10.3	15.5	7.2
	Sept. 11–13	3	1.0	83.0	5.9	2.1	1.8	5.1	.9	3.0	79.5	4.3	16.2	19.6
	Sept. 14–15	2	1.0	79.2	5.9	2.1	1.8	5.5	1.2	6.1	76.8	5.7	17.5	13.5
XIII	Sept. 16–17	2	1.5	76.0	5.9	2.1	2.0	6.2	1.3	8.5	87.0	5.2	7.8	16.7
	Sept. 18–20	3	1.5	80.7	5.5	2.0	1.9	4.7	1.4	5.7	85.7	6.1	8.2	14.1
	Sept. 21–22	2	1.5	81.2	6.1	2.1	1.8	5.6	1.5	3.5	79.8	4.9	15.5	16.3
XIV	Sept. 23–24	2	2.5	82.2	5.7	2.0	1.8	4.7	1.7	3.7	81.0	5.0	14.0	16.2
	Sept. 25–27	3	2.5 3.0	80.3	5.9	2.2	2.0	4.7	2.6	4.3	83.1	5.2	11.7	16.0
	Sept. 28	1	3.0	81.0	4.5	2.8	2.5	4.8	3.0	3.9	79.5	5.9	14.6	13.5
XV	Sept. 29	1	6.0	80.4	4.4	2.0	1.7	4.9	3.4	4.9	83.8	4.8	11.4	17.5
	Sept. 30	1	6.0	77.8	4.6	1.9	1.6	5.0	3.8	6.9	80.0	4.0	16.0	20.0
	Oct. 1	1	6.0	79.7	5.3	2.0	1.7	4.5	3.7	4.8	81.2	3.0	15.8	27.0
XVI	Oct. 2	1	0	79.0	6.9	2.3	2.0	4.9	.9	6.0	76.7	4.6	18.7	16.6
	Oct. 3–4	2	0	80.5	4.4	2.3	1.9	5.0	1.0	6.8	80.1	4.9	15.0	16.3
	Oct. 5–6	2	0	83.0	5.0	1.9	1.6	4.9	.7	4.5	81.7	5.8	12.5	14.1
XVII	Oct. 7–8	2	0	82.3	5.5	2.1	1.8	5.4	.3	4.4	84.4	4.3	11.3	19.6
	Oct. 9–11	3	0	82.2	4.8	2.1	1.8	5.0	.3	5.6	81.6	2.9	15.5	28.1
XVIII	Oct. 12–13	2	0	81.3	5.7	1.9	1.7	4.8	.3	6.0	81.3	6.1	12.6	13.2
	Oct. 14	1	0	81.9	6.5	2.0	1.6	4.8	.5	4.3	78.9	4.6	16.5	17.3

Percentages, nitrogen and sulphur in urine—Continued.

SUBJECT III O.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	In per cent of total nitrogen.							In per cent of total sulphur.			Ratio inorganic sulphur to ethereal sulphur.
				Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinin nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	
			Grams.											
I	May 27–31	5	0	......	6.4	1.7	1.2	3.2	......	......	76.2	7.3	16.5	10.4
	June 1–5	5	0	......	6.6	2.0	1.3	3.9	......	......	78.1	7.8	14.1	10.0
	June 6–10	5	0	76.0	7.7	2.0	1.3	3.3	0.6	10.4	77.7	6.7	15.6	11.6
I A	June 11–15	5	0	77.0	7.1	2.0	1.4	3.1	.6	10.2	70.8	9.8	19.4	7.2
	June 16–17	2	0	78.1	7.2	1.9	1.5	3.7	.6	8.5	79.5	4.9	15.6	16.2
	June 18–19	2	0	83.6	7.9	2.5	1.8	4.2	.7	1.1	75.1	7.1	17.8	10.6
II	June 20–21	2	0	82.6	5.5	2.2	1.7	4.1	.6	5.0	81.4	6.9	11.7	11.8
	June 22–23	2	0	83.2	6.8	2.3	1.7	3.3	.5	3.9	80.0	4.8	15.2	16.6
	June 24–25	2	0	81.2	7.1	2.0	1.5	3.0	.4	6.3	77.5	7.4	15.1	10.5
	June 29–30	2	.6	79.0	8.1	2.3	1.9	3.8	1.2	5.6	75.5	8.6	15.9	8.8
III	July 1–2	2	.6	83.0	6.9	1.6	1.3	3.5	1.0	4.0	77.5	6.2	16.3	12.5
	July 3–5	3	.6	79.2	6.3	2.2	1.7	4.1	1.3	6.9	76.8	7.3	15.9	10.5
III*a*	July 6–7	2	.45	81.6	6.9	2.0	1.6	3.7	1.1	4.7	75.3	8.1	16.6	9.3
	July 8–9	2	.45	83.6	6.8	1.4	1.1	3.4	1.1	3.7	78.7	3.4	17.9	23.1
	July 10–12	3	.45	83.0	6.3	1.6	1.3	3.2	1.3	4.6	77.5	6.5	16.0	11.9
IV	July 13–14	2	.45	82.6	5.9	1.6	1.3	3.2	.8	5.9	78.5	5.6	15.9	14.0
	July 15–16	2	.45	84.8	6.3	1.7	1.4	3.1	.7	3.4	76.5	8.7	14.8	8.8
	July 17–19	3	.45	82.8	6.5	1.7	1.3	3.9	1.1	4.0	78.6	8.5	12.9	9.3
V	July 20–21	2	.45	83.1	5.3	1.3	1.1	4.6	.9	4.8	80.1	9.6	10.3	8.4
	July 22–23	2	.45	82.6	5.8	1.2	1.0	4.0	.8	5.6	77.4	7.1	15.5	10.9
	July 24–26	3	.45	82.6	7.2	1.5	1.2	3.1	1.3	4.3	77.0	8.8	14.2	8.8
VI	July 27–28	2	.45	80.0	6.0	2.0	1.7	3.6	1.0	7.4	84.2	7.8	8.0	10.8
	July 29–30	2	.45	79.6	6.4	1.7	1.4	3.5	1.0	7.8	76.8	8.8	14.4	8.7
	July 31–Aug. 2	3	.45	79.7	6.7	1.6	1.3	3.8	.9	7.3	78.7	5.2	16.1	15.1
VII	Aug. 3–4	2	.45	80.4	5.8	1.7	1.4	3.3	.9	7.9	80.8	6.4	12.8	12.6
	Aug. 5–6	2	.45	78.9	7.1	1.6	1.3	4.2	1.1	7.1	80.0	9.0	11.0	8.9
	Aug. 7–9	3	.45	80.8	6.4	1.8	1.5	3.9	1.1	6.0	80.2	6.1	13.7	13.1
VIII	Aug. 10–11	2	.45	81.1	5.3	1.9	1.6	3.6	.8	7.3	81.3	6.9	11.8	11.8
	Aug. 12–13	2	.45	81.4	5.7	1.9	1.5	3.6	1.0	6.4	85.5	6.5	8.0	13.1
	Aug. 14–16	3	.45	82.8	6.0	1.7	1.4	4.4	.8	4.3	78.4	10.5	11.1	7.5
IX	Aug. 17–18	2	.45	84.8	5.4	1.7	1.3	3.7	.8	3.6	80.9	6.8	12.3	11.9
	Aug. 19–20	2	.45	83.6	5.7	1.6	1.2	3.7	1.1	4.3	84.0	8.1	7.9	10.4
	Aug. 21–23	3	.45	82.1	5.3	1.7	1.3	3.2	.9	6.8	81.3	4.4	14.3	18.5
X	Aug. 24–25	2	.45	83.2	4.9	1.5	1.1	3.4	.8	6.2	83.1	6.7	10.2	12.4
	Aug. 26–27	2	.45	81.9	5.4	1.5	1.1	3.9	.8	6.5	82.5	7.8	9.7	10.6
	Sept. 2–3	2	.6	85.3	3.2	1.8	1.4	4.5	1.1	4.1	74.6	9.7	15.7	7.7
XI	Sept. 4–6	3	.6	86.2	3.6	1.7	1.4	4.1	1.2	3.2	78.2	7.9	13.9	9.9
	Sept. 7–8	2	.6	84.0	4.0	1.6	1.3	3.6	1.1	5.7	78.8	8.0	13.2	9.8
	Sept. 9–10	2	1.0	85.8	4.6	1.6	1.3	3.6	1.0	3.4	82.0	4.8	13.2	17.1
XII	Sept. 11–13	3	1.0	84.8	5.6	1.9	1.6	3.6	1.1	3.0	77.1	8.3	14.6	9.3
	Sept. 14–15	2	1.0	82.8	5.6	1.7	1.3	3.8	1.3	4.8	78.1	6.2	15.7	12.6
	Sept. 16–17	2	1.5	82.5	5.4	1.7	1.4	3.6	1.5	5.3	80.7	8.2	11.1	9.8
XIII	Sept. 18–20	3	1.5	81.3	5.5	1.7	1.4	3.3	1.5	6.7	78.4	6.2	15.4	12.6
	Sept. 21–22	2	1.5	86.0	5.1	1.6	1.2	4.2	1.6	1.5	81.3	4.3	14.4	18.9
	Sept. 23–24	2	2.5	81.5	5.1	1.8	1.4	4.8	2.5	4.3	79.7	7.7	12.6	10.3
XIV	Sept. 25–27	3	2.5 3.0	79.9	5.4	1.6	1.3	3.9	3.1	6.1	77.9	3.8	18.3	20.5
	Sept. 28	1	3.0	77.8	5.5	1.9	1.6	5.1	3.6	6.1	81.3	6.3	12.4	12.9
	Sept. 29	1	6.0	83.3	5.0	1.5	1.1	4.1	4.4	1.7	78.9	7.8	13.3	10.1
XV	Sept. 30	1	6.0	79.6	5.2	1.6	1.2	4.0	5.0	4.4	80.8	7.8	11.4	10.4
	Oct. 1	1	6.0	78.4	5.5	1.8	1.4	3.9	3.8	6.6	80.4	6.1	13.5	13.2
	Oct. 2	1	0	81.6	4.8	2.1	1.6	4.3	1.3	5.9	78.5	7.5	14.0	10.5
XVI	Oct. 3–4	2	0	82.5	5.1	2.0	1.5	4.6	1.3	4.5	75.9	11.1	13.0	6.8
	Oct. 5–6	2	0	81.5	5.2	1.6	1.2	4.8	.8	6.1	79.5	8.7	11.8	9.2
XVII	Oct. 7–8	2	0	81.4	5.4	1.5	1.2	4.0	.7	7.0	79.6	4.5	15.9	17.7
	Oct. 9–11	3	0	80.8	6.0	1.7	1.3	4.3	.7	6.5	78.8	7.8	13.4	10.1
XVIII	Oct. 12–13	2	0	82.4	5.9	1.8	1.4	3.8	.5	5.6	84.5	8.7	6.8	9.7
	Oct. 14–15	2	0	81.0	6.8	1.8	1.4	3.8	.5	6.1	78.4	12.1	9.5	6.5

Percentages, nitrogen and sulphur in urine—Continued.

SUBJECT IV L.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	In per cent of total nitrogen.							In per cent of total sulphur.			Ratio inorganic sulphur to ethereal sulphur.
				Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinin nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	
			Grams.											
I	June 14	1	0	86.6	4.7	1.3	1.1	2.4	0.4	4.6	83.5	5.9	10.6	14.1
	June 15–16	2	0	87.6	4.7	1.6	1.3	2.5	.4	3.2	81.0	5.2	13.8	15.5
	June 17–18	2	0	89.5	4.7	1.5	1.3	2.5	.4	1.4	80.3	3.0	16.7	26.8
	June 19–20	2	0	84.9	4.7	1.6	1.4	2.7	.4	5.7	76.8	5.5	17.7	13.9
II	June 21–22	2	0	84.5	3.5	1.8	1.5	3.2	.4	6.6	88.0	3.7	8.3	22.1
	June 23–24	2	0	85.2	3.9	1.8	1.5	3.2	.5	5.4	85.7	3.5	10.8	24.5
	June 25–26	2	0	85.5	3.5	1.9	1.4	2.7	.5	5.9	85.4	3.5	11.1	24.4
	June 27	1	0	86.6	3.4	1.7	1.4	3.1	.4	4.8	83.4	3.5	13.1	23.8
III	July 3–5	3	.3	79.0	6.2	1.8	1.5	4.9	.6	7.5	78.9	5.8	15.3	13.6
	July 6–7	2	.3	82.9	5.1	1.7	1.5	5.0	.8	4.5	80.2	7.3	12.5	11.0
	July 8–9	2	.3	86.3	3.7	1.9	1.6	4.1	.9	3.1	79.1	3.8	16.8	22.9
IV	July 10–12	3	.3	82.0	4.5	1.9	1.7	4.2	.8	6.6	80.2	5.4	14.4	14.8
	July 13–14	2	.3	84.9	4.4	1.8	1.5	3.9	.7	4.3	79.5	4.3	16.2	18.5
	July 15–16	2	.3	85.3	4.8	1.9	1.6	4.4	.6	3.0	79.0	4.7	16.3	16.8
V	July 17–19	3	.3	81.4	5.1	1.9	1.6	5.0	.5	6.1	80.9	2.4	16.7	33.7
	July 20–21	2	.3	84.7	4.8	1.7	1.5	4.8	.5	3.5	81.4	5.5	13.1	14.8
	July 22–23	2	.3	85.5	5.2	1.7	1.4	4.2	.8	2.6	77.8	5.8	16.4	13.4
VI	July 24–26	3	.3	84.1	4.5	1.8	1.5	3.6	.8	5.2	80.1	6.2	13.7	12.9
	July 27–28	2	.3	80.7	5.4	2.2	1.9	4.9	1.0	5.8	78.6	7.7	13.7	10.2
	July 29–30	2	.3	79.1	6.3	2.2	1.6	4.6	1.1	6.7	80.1	5.5	14.4	14.6
VII	July 31–Aug. 2	3	.3	83.9	4.2	1.6	1.4	3.2	.6	6.5	81.1	6.7	12.2	12.1
	Aug. 3–4	2	.3	82.1	4.3	1.8	1.5	4.5	.6	6.7	79.1	7.6	13.3	10.4
	Aug. 5–6	2	.3	83.0	3.9	2.4	1.9	4.9	.7	5.1	81.0	6.2	12.8	13.0
VIII	Aug. 7–9	3	.3	81.4	4.5	2.1	1.9	3.4	.8	7.8	75.2	7.1	17.7	10.6
	Aug. 10–11	2	.3	81.9	3.9	1.5	1.2	4.4	.6	7.7	76.7	5.5	17.8	13.9
	Aug. 12–13	2	.3	81.8	3.1	2.2	1.8	5.5	.7	6.7	79.0	5.4	15.6	14.6
IX	Aug. 14–16	3	.3	85.9	2.8	2.0	1.6	5.4	.7	3.2	81.8	6.0	12.2	13.6
	Aug. 17–18	2	.3	82.6	3.3	2.0	1.7	3.5	.7	7.7	81.2	4.2	14.6	19.3
	Aug. 19–20	2	.3	82.9	3.1	1.9	1.7	4.1	.5	7.5	84.6	2.8	12.6	30.1
X	Aug. 21–23	3	.3	82.8	3.8	1.9	1.6	4.1	.6	6.8	72.7	3.9	23.4	18.6
	Aug. 24–25	2	.3	84.1	3.4	1.8	1.5	4.1	.6	6.0	81.4	5.6	13.0	14.5
	Aug. 26–27	2	.3	81.1	3.4	1.7	1.5	4.0	.6	9.2	81.1	4.2	14.7	19.3
XI	Sept. 2–3	2	.6	84.2	3.4	1.7	1.5	5.5	.8	4.4	81.4	4.2	14.4	19.3
	Sept. 4–6	3	.6	84.7	3.5	2.0	1.7	4.2	.8	4.8	80.5	3.6	15.9	22.3
	Sept. 7–8	2	.6	84.7	4.2	1.8	1.5	4.4	.7	4.2	76.6	6.9	16.5	11.1
XII	Sept. 9–10	2	1.0	86.3	3.0	2.0	1.8	4.8	1.4	2.5	75.3	5.9	18.8	12.7
	Sept. 11–13	3	1.0	85.5	3.2	2.0	1.7	4.5	1.1	3.7	81.0	6.3	12.7	12.9
	Sept. 14–15	2	1.0	84.7	3.6	1.6	1.4	4.0	1.1	5.0	78.5	7.3	14.2	10.7
XIII	Sept. 16–17	2	1.5	84.2	3.3	1.7	1.6	3.5	1.0	6.3	82.0	3.8	14.2	21.6
	Sept. 18–20	3	1.5	84.3	3.9	1.6	1.5	4.4	1.5	4.3	78.2	5.7	16.1	13.7
	Sept. 21–22	2	1.5	85.5	3.4	1.8	1.6	5.4	1.6	2.3	79.2	4.4	16.4	18.0
XIV	Sept. 23–24	2	2,5	82.4	3.4	1.8	1.6	5.3	1.7	5.4	81.4	4.3	14.3	18.9
	Sept. 25–27	3	2.5 3.0	85.8	4.0	1.8	1.5	5.5	2.4	.5	77.9	5.3	16.8	14.7
	Sept. 28	1	3.0	82.9	3.1	2.4	2.0	5.5	2.5	3.6	83.4	3.4	13.2	24.5
XV	Sept. 29	1	6.0	78.3	4.2	1.9	1.6	4.9	4.6	6.1	83.1	5.4	11.5	15.4
	Sept. 30	1	6.0	81.9	3.3	1.6	1.4	3.6	3.7	5.9	80.4	7.5	12.1	10.7
	Oct. 1	1	6.0	83.1	2.6	1.7	1.5	4.3	4.1	4.2	78.5	3.4	18.1	23.1
XVI	Oct. 2	1	0	84.9	3.2	1.8	1.6	4.2	1.3	4.6	80.1	4.6	15.3	17.4
	Oct. 3–4	2	0	80.7	4.2	2.0	1.7	5.7	1.4	6.0	78.2	6.3	15.5	12.4
	Oct. 5–6	2	0	82.3	4.5	1.9	1.6	5.2	.9	5.2	78.3	6.3	15.4	12.4
XVII	Oct. 7–8	2	0	83.5	3.8	1.8	1.4	5.2	.5	5.2	82.3	4.6	13.1	17.8
	Oct. 9–11	3	0	84.6	3.1	1.8	1.5	5.1	.6	4.8	82.3	3.9	13.8	21.1
XVIII	Oct. 12–13	2	0	85.7	3.6	1.5	1.3	4.5	.5	4.2	78.7	6.5	14.8	12.1
	Oct. 14–15	2	0	81.1	5.8	2.0	1.7	4.1	.5	6.5	83.2	3.2	13.6	26.0

SERIES D.

Percentages of averages, nitrogen and sulphur in urine.

SUBJECT I R.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate in grams.	In per cent of total nitrogen.							In per cent of total sulphur.			Ratio, inorganic sulphur to ethereal sulphur.
				Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	
I	June 15–22..........	8	0	83.7	4.1	2.0	1.7	4.0	0.6	5.6	80.1	4.3	15.6	18.5
II	June 23–28..........	6	0	83.3	4.1	1.8	1.5	4.7	.5	5.6	76.7	4.9	18.4	15.7
	Average......	....	......	83.5	4.1	1.9	1.6	4.3	.6	5.6	78.4	4.6	17.0	17.1
III	July 3–9............	7	.3	80.0	4.7	1.8	1.6	4.7	.8	8.0	78.8	4.8	16.4	16.4
IV	July 10–16..........	7	.3	83.0	4.5	1.7	1.5	3.5	.8	6.5	79.2	4.9	15.9	16.1
V	July 17–23..........	7	.3	82.6	4.1	1.9	1.7	4.2	1.0	6.2	80.3	4.2	15.5	19.1
VI	July 24–30..........	7	.3	82.6	5.0	2.0	1.8	4.9	1.0	4.5	77.7	6.1	16.2	12.7
VII	July 31–Aug. 6......	7	.3	82.6	3.7	2.1	1.7	4.6	.9	6.1	80.4	4.2	15.4	19.1
VIII	Aug. 7–13..........	7	.3	82.0	3.6	2.0	1.7	3.8	.6	8.0	77.7	4.6	17.7	16.9
IX	Aug. 14–20..........	7	.3	83.5	3.5	1.9	1.6	4.2	.8	6.1	81.3	5.0	13.7	16.3
X	Aug. 21–27..........	7	.3	81.3	3.4	2.0	1.6	4.0	.8	8.5	78.8	5.4	15.8	14.6
	Average......	....	......	82.1	4.0	1.9	1.6	4.2	.8	7.0	79.3	5.0	15.7	15.9
XI	Sept. 2–8............	7	.6	85.6	4.7	2.0	1.7	3.4	.9	3.4	81.0	3.7	15.3	21.8
XII	Sept. 9–15...........	7	1.0	85.1	4.1	1.7	1.5	4.0	1.3	3.8	80.2	4.1	15.7	19.6
XIII	Sept. 16–22..........	7	1.5	83.5	4.2	1.7	1.5	3.8	1.8	5.0	78.7	4.2	17.1	18.8
XVI	Sept. 23–28..........	6	(*a*)	84.0	3.7	1.9	1.7	4.6	2.6	3.2	80.1	4.5	15.4	17.8
XV	Sept. 29–Oct. 1.....	3	6.0	83.7	3.1	1.7	1.4	3.6	3.9	4.0	83.0	3.2	13.8	25.9
	Average......	....	......	84.4	3.9	1.8	1.6	3.8	2.2	3.9	80.7	3.9	15.4	20.7
XVI	Oct. 2–6............	5	0	86.5	3.7	2.0	1.7	3.6	.8	3.4	80.4	4.1	15.5	19.5
XVII	Oct. 7–11...........	5	0	83.8	3.1	2.1	1.6	4.6	.6	5.8	84.4	5.0	10.6	16.9
XVIII	Oct. 12–15..........	4	0	83.3	4.0	1.8	1.5	3.4	.3	7.2	79.8	6.8	13.4	11.7
	Average......	....	......	84.5	3.6	2.0	1.6	3.8	.6	5.5	81.5	5.3	13.2	15.3

SUBJECT II H.

I	June 16–23..........	8	0	80.7	5.3	2.3	2.1	3.5	0.5	7.7	82.7	5.6	11.7	14.7
II	June 24–29..........	6	0	80.6	6.6	2.3	2.0	5.2	.6	4.7	77.2	4.6	18.2	16.7
	Average......	....	......	80.7	5.9	2.3	2.1	4.3	.6	6.2	80.0	5.1	14.9	15.7
III	July 3–9............	7	.45	80.1	6.1	2.2	2.0	5.3	.8	5.5	75.7	5.6	18.7	13.5
IV	July 10–16..........	7	.45	81.0	5.6	2.1	1.9	4.8	.9	5.6	75.2	4.3	20.5	17.4
V	July 17–23..........	7	.45	81.7	5.4	2.3	1.9	4.5	.9	5.2	79.0	5.2	15.8	15.2
VI	July 24–30..........	7	.45	80.6	5.6	2.5	2.2	4.9	.9	5.5	76.9	6.1	17.0	12.6
VII	July 31–Aug. 6......	7	.45	80.3	5.8	2.1	1.7	4.7	1.1	6.0	79.5	7.0	13.5	11.4
VIII	Aug. 7–13..........	7	.45	79.3	5.3	2.2	1.9	4.6	.6	8.0	78.5	6.9	14.6	11.4
IX	Aug. 14–20..........	7	.45	82.6	5.2	2.1	1.9	4.9	.7	4.5	81.0	4.7	14.3	17.2
X	Aug. 21–27..........	7	.45	80.8	5.2	2.3	1.8	5.5	1.0	5.2	80.2	5.2	14.6	15.4
	Average......	....	......	80.7	5.5	2.3	2.0	4.9	.9	5.7	78.2	5.6	16.2	13.9
XI	Sept. 2–8...........	7	.6	81.4	5.9	2.2	1.8	5.2	.9	4.4	78.3	5.8	15.9	16.3
XII	Sept. 9–15..........	7	1.0	83.4	5.5	2.0	1.8	5.1	1.0	3.0	77.0	6.7	16.3	11.5
XIII	Sept. 16–22.........	7	1.5	79.6	5.7	2.1	1.9	5.4	1.3	5.9	84.7	4.9	10.4	17.3
XIV	Sept. 23–28.........	6	(*a*)	80.9	5.6	2.2	2.0	4.7	2.3	4.3	81.7	5.3	13.0	15.4
XV	Sept. 29–Oct. 1....	3	6.0	79.3	4.7	2.0	1.7	4.8	3.7	5.5	81.8	4.0	14.2	20.4
	Average.....	....	......	80.8	5.5	2.1	1.8	5.0	1.9	4.7	80.5	5.4	14.1	14.9
XVI	Oct. 2–6............	5	0	81.1	5.2	2.2	1.9	5.0	.9	5.6	80.0	5.2	14.8	15.4
XVII	Oct. 7–11...........	5	0	82.2	5.1	2.1	1.8	5.1	.3	5.2	82.6	3.4	14.0	24.3
XVIII	Oct. 12–14..........	3	0	81.4	6.0	2.0	1.7	4.8	.4	5.4	80.5	5.6	13.9	14.4
	Average.....	....	......	81.6	5.4	2.1	1.8	5.0	.5	5.4	81.0	4.7	14.3	17.2

a 4 days=2.5; 2 days=3.

Percentages of averages, nitrogen and sulphur in urine—Continued.

SUBJECT III O.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate in grams.	In per cent of total nitrogen. Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	In per cent of total sulphur. Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Ratio, inorganic sulphur to ethereal sulphur.
I	May 27–June 5	10	0	0	6.5	1.8	1.2	3.4	0	0	77.1	7.6	15.3	10.1
I A	June 6–17	12	0	76.8	7.7	1.9	1.4	3.3	.6	9.7	75.1	7.8	17.1	9.6
II	June 18–25	8	0	82.5	6.8	2.3	1.7	3.7	.6	4.1	78.7	6.5	14.8	12.1
	Average	....	......	79.7	7.0	2.0	1.4	3.5	.6	6.9	77.0	7.3	15.7	10.6
III	June 29–July 5	7	.6	80.3	7.0	2.0	1.7	3.9	1.1	5.7	76.7	7.3	16.0	10.5
III A	July 6–9	4	.45	82.7	6.8	1.7	1.4	3.5	1.1	4.2	77.2	5.6	17.2	13.8
IV	July 10–16	7	.45	83.4	6.2	1.6	1.3	3.2	1.0	4.6	77.5	6.9	15.6	11.2
V	July 17–23	7	.45	82.8	6.0	1.4	1.1	4.1	1.0	4.7	78.6	8.3	13.1	9.5
VI	July 24–30	7	.45	80.9	6.6	1.7	1.4	3.4	1.1	6.3	79.2	8.5	12.3	9.3
VII	July 31–Aug. 6	7	.45	79.7	6.5	1.6	1.3	3.7	1.0	7.5	79.7	6.5	13.8	12.2
VIII	Aug. 7–13	7	.45	81.1	5.9	1.8	1.5	3.8	1.0	6.4	81.9	6.5	11.6	12.6
IX	Aug. 14–20	7	.45	83.8	5.7	1.7	1.3	4.0	.9	3.9	80.8	8.8	10.4	9.2
X	Aug. 21–27	7	.45	82.4	5.2	1.6	1.2	3.5	.8	6.5	82.2	6.0	11.8	13.7
	Average	....	......	81.9	6.2	1.7	1.3	3.7	1.0	5.5	79.3	7.2	13.5	11.3
XI	Sept. 2–8	7	.6	85.3	3.6	1.7	1.4	4.0	1.1	4.3	77.5	8.3	14.2	9.4
XII	Sept. 9–15	7	1.0	84.4	5.3	1.8	1.5	3.7	1.2	3.6	78.7	6.8	14.5	11.6
XIII	Sept. 16–22	7	1.5	82.8	5.4	1.7	1.4	3.7	1.6	4.8	80.0	6.1	13.9	13.1
XIV	Sept. 23–28	6	(a)	80.1	5.3	1.8	1.4	4.4	3.0	5.4	79.1	5.5	15.4	14.4
XV	Sept. 29–Oct. 1	3	6.0	80.7	5.2	1.6	1.2	4.0	4.4	4.1	80.0	8.3	11.7	9.6
	Average	....	......	82.6	5.0	1.7	1.4	4.0	2.3	4.4	79.1	7.0	13.9	11.6
XVI	Oct. 2–6	5	0	81.8	5.1	1.9	1.4	4.6	1.1	5.5	78.0	9.3	12.7	8.4
XVII	Oct. 7–11	5	0	81.2	5.7	1.6	1.3	4.1	.7	6.7	79.2	6.3	14.5	12.6
XVIII	Oct. 12–15	4	0	81.7	6.4	1.8	1.4	3.8	.5	5.8	81.6	10.4	8.0	7.9
	Average	....	......	81.5	5.7	1.8	1.4	4.2	.8	6.0	79.6	8.7	11.7	9.6

SUBJECT IV L.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate in grams.	In per cent of total nitrogen. Urea nitrogen.	Ammonia nitrogen.	Purin nitrogen.	Uric acid nitrogen.	Creatinine nitrogen.	Hippuric acid nitrogen.	Undetermined nitrogen.	In per cent of total sulphur. Inorganic sulphur.	Ethereal sulphur.	Neutral sulphur.	Ratio, inorganic sulphur to ethereal sulphur.
I	June 14–20	7	0	87.4	4.7	1.5	1.3	2.5	0.4	3.5	79.8	4.7	15.5	16.9
II	June 21–27	7	0	86.1	3.6	1.8	1.4	3.1	.4	5.0	85.7	3.6	10.7	23.8
	Average	....	......	86.8	4.2	1.6	1.3	2.8	.4	4.2	82.7	4.2	13.1	19.7
III	July 3–9	7	.3	82.4	5.1	1.8	1.5	4.7	.7	5.3	79.4	5.7	14.9	13.9
IV	July 10–16	7	.3	83.3	4.5	1.9	1.6	4.2	.7	5.4	79.6	4.9	15.5	16.2
V	July 17–23	7	.3	83.7	5.1	1.8	1.5	4.7	.6	4.1	80.2	4.2	15.6	19.1
VI	July 24–30	7	.3	82.1	5.2	2.1	1.6	4.3	.9	5.4	79.7	6.3	14.0	12.7
VII	July 31–Aug. 6	7	.3	82.6	4.2	1.9	1.5	4.0	.6	6.7	80.4	6.7	12.9	12.0
VIII	Aug. 7–13	7	.3	81.4	4.0	1.9	1.6	4.3	.7	7.7	76.8	6.1	17.1	12.6
IX	Aug. 14–20	7	.3	84.3	3.1	2.0	1.7	4.5	.6	5.5	82.7	4.4	12.9	8.8
X	Aug. 21–27	7	.3	82.6	3.5	1.8	1.5	4.1	.6	7.4	77.5	4.5	18.0	17.2
	Average	....	......	82.8	4.3	1.9	1.6	4.3	.7	6.0	79.5	5.4	15.1	14.7
XI	Sept. 2–8	7	.6	84.8	3.7	1.9	1.6	4.6	.8	4.2	79.4	4.8	15.8	16.5
XII	Sept. 9–15	7	1.0	86.1	3.2	1.8	1.6	4.4	1.2	3.3	79.0	6.5	14.5	12.2
XIII	Sept. 16–22	7	1.5	84.7	3.6	1.7	1.5	4.4	1.3	4.3	79.8	4.7	15.5	17.0
XIV	Sept. 23–28	6	(a)	83.6	3.6	2.0	1.6	5.5	2.2	3.1	80.1	4.6	15.3	17.4
XV	Sept. 29–Oct. 1	3	6.0	81.1	3.4	1.8	1.5	4.2	4.1	5.4	80.6	5.6	13.8	14.4
	Average	....	......	84.1	3.5	1.8	1.5	4.6	1.9	4.1	79.8	5.3	14.9	15.1
XVI	Oct. 2–6	5	0	82.5	4.1	2.0	1.7	5.2	1.1	5.1	78.7	5.9	15.4	14.6
XVII	Oct. 7–11	5	0	84.2	3.4	1.8	1.5	5.1	.6	4.9	82.2	4.2	13.6	19.5
XVIII	Oct. 12–15	4	0	83.9	4.6	1.8	1.5	4.3	.5	4.9	81.2	4.7	14.1	17.3
	Average	....	......	83.5	4.0	1.9	1.5	4.9	.7	5.0	80.7	4.9	14.4	17.1

a 4 days=2.5; 2 days=3.

SERIES E.

Hippuric acid in urine.

SUBJECT I R.

Period.	Number of days of period.	Daily averages in grams.			
		Sodium benzoate ingested.	Benzoic acid, calculated from—		
			Sodium benzoate ingested.	Nitrogen of hippuric acid eliminated in the urine.	Nitrogen of hippuric acid eliminated in the urine (preceding column) *less* the average daily amount eliminated during the fore period (i.e., 0.4799).
Fore period	14	0	0	0.4799	0
Low benzoate period	56	.3	.2541	.7852	.3053
High benzoate period	30	1.857	1.5730	2.041	1.5611
After period	14	0	0	.6337	.1538

SUBJECT II H.

					(i. e., 0.6701.)
Fore period	14	0	0	0.6701	0
Low benzoate period	56	.45	.3813	1.0120	.3419
High benzoate period	30	1.857	1.5730	2.2390	1.5689
After period	13	0	0	.7247	.0546

SUBJECT III O.

					(i. e., 0.6240.)
Fore period	10	0	0	0.6240	0
Low benzoate period	60	.4675	.3961	1.2240	.6000
High benzoate period	30	1.8570	1.5730	2.4840	1.8600
After period	14	0	0	.9239	.2999

SUBJECT IV L.

					(i. e., 0.6415.)
Fore period	15	0	0	0.6415	0
Low benzoate period	56	.30	.2541	.8273	.1858
High benzoate period	30	1.857	1.5730	2.0710	1.4295
After period	14	0	0	.8722	.2307

SERIES F.

Nitrogen balance, food, urine, and feces.

SUBJECT I R.

No.	Date (1908).	Number of days of period.	Daily dose of sodium benzoate.	Nitrogen.									
				For period.					Daily average.				
				In food.	In urine.	In feces.	In urine and feces.	Balance.	In food.	In urine.	In feces.	In urine and feces.	Balance.
			Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.
I	June 15–22	8	0	117.6	81.2	14.2	95.4	+22.2	14.70	10.15	1.78	11.93	+2.77
II	June 23–28	6	0	83.5	54.5	11.3	65.8	+17.7	13.92	9.08	1.88	10.96	+2.96
	Average								14.36	9.69	1.83	11.52	+2.85
III	July 3–9	7	.3	104.5	70.2	13.0	83.2	+21.3	14.93	10.03	1.86	11.89	+3.04
IV	July 10–16	7	.3	94.6	83.9	13.1	97.0	− 2.4	13.50	12.00	1.87	13.87	− .34
V	July 17–23	7	.3	97.0	77.0	12.6	89.6	+ 7.4	13.86	11.00	1.80	12.80	+1.06
VI	July 24–30	7	.3	94.2	66.2	10.3	76.5	+17.7	13.46	9.46	1.47	10.93	+2.53
VII	July 31–Aug. 6	7	.3	81.2	69.5	10.8	80.3	+ .9	11.60	9.93	1.54	11.47	+ .13
VIII	Aug. 7–13	7	.3	87.7	78.2	10.4	88.6	− .9	12.53	11.17	1.49	12.66	− .13
IX	Aug. 14–20	7	.3	[a] 94.6	77.2	11.2	88.4	+ 6.2	13.51	11.03	1.60	12.63	+ .88
X	Aug. 21–27	7	.3	101.0	86.6	6.7	93.3	+ 7.7	14.43	12.37	.96	13.33	+1.10
	Average			94.4	76.1	11.0	87.1	+ 7.2	13.50	10.87	1.57	12.44	+1.03
XI	Sept. 2–8	7	.6	104.8	82.8	11.9	94.7	+10.1	14.97	11.83	1.70	13.53	+1.44
XII	Sept. 9–15	7	1.0	96.6	88.7	9.0	97.7	− 1.1	13.80	12.67	1.29	13.96	− .16
XIII	Sept. 16–22	7	1.5	101.8	84.5	11.6	96.1	+ 5.7	14.54	12.07	1.66	13.73	+ .81
XIV	Sept. 23–28	6	([b])	99.6	71.3	7.6	78.9	+20.7	16.60	11.88	1.27	13.15	+3.45
XV	Sept. 29–Oct. 1	3	6.0	48.5	46.2	5.8	52.0	− 3.5	16.17	15.40	1.93	17.33	−1.16
	Average								15.04	12.45	1.53	13.98	+1.06
XVI	Oct. 2–6	5	0	77.9	66.3	6.5	72.8	+ 5.1	15.58	13.26	1.30	14.56	+1.02
XVII	Oct. 7–11	5	0	61.2	51.9	6.7	58.6	+ 2.6	12.24	10.38	1.34	11.72	+ .52
XVIII	Oct. 12–15	4	0	61.5	53.0	5.6	58.6	+ 2.9	15.37	13.25	1.40	14.65	+ .72
	Average								14.33	12.23	1.34	13.57	+ .76

SUBJECT II H.

No.	Date (1908).	Number of days of period.	Daily dose of sodium benzoate.	For period: In food.	In urine.	In feces.	In urine and feces.	Balance.	Daily average: In food.	In urine.	In feces.	In urine and feces.	Balance.
I	June 16–23	8	0	127.6	120.4	10.3	130.7	− 3.1	15.95	15.05	1.29	16.34	−0.39
II	June 24–29	6	0	89.5	76.2	7.7	83.9	+ 5.6	14.91	12.70	1.28	13.98	+ .93
	Average								15.50	14.04	1.29	15.33	+ .18
III	July 3–9	7	.45	119.3	90.4	10.9	101.3	+18.0	17.04	12.91	1.56	14.47	+2.57
IV	July 10–16	7	.45	131.7	97.0	13.3	110.3	+21.4	18.81	13.86	1.90	15.76	+3.06
V	July 17–23	7	.45	114.1	95.8	9.6	105.4	+ 8.7	16.30	13.69	1.37	15.06	+1.24
VI	July 24–30	7	.45	118.3	93.8	10.2	104.0	+14.3	16.90	13.40	1.46	14.86	+2.04
VII	July 31–Aug. 6	7	.45	116.0	97.1	9.2	106.3	+ 9.7	16.57	13.87	1.31	15.18	+1.38
VIII	Aug. 7–13	7	.45	120.8	98.9	9.1	108.0	+12.8	17.26	14.13	1.30	15.43	+1.83
IX	Aug. 14–20	7	.45	99.1	107.5	8.8	116.3	−17.2	14.16	15.36	1.26	16.62	−2.46
X	Aug. 21–27	7	.45	120.6	91.3	8.0	99.3	+21.3	17.23	13.04	1.15	14.19	+3.04
	Average			117.5	96.5	9.9	106.4	+11.1	16.80	13.80	1.41	14.63	+1.59
XI	Sept. 2–8	7	.6	102.7	99.6	10.1	109.7	− 7.0	14.67	14.23	1.44	15.67	−1.00
XII	Sept. 9–15	7	1.0	120.7	120.1	8.6	128.7	− 8.0	17.24	17.16	1.23	18.39	−1.15
XIII	Sept. 16–22	7	1.5	117.8	108.6	9.8	118.4	− .6	16.83	15.51	1.40	16.91	− .08
XIV	Sept. 23–28	6	([b])	[c]109.0	93.5	12.3	105.8	+ 3.2	18.17	15.58	2.05	17.63	+ .54
XV	Sept. 29–Oct. 1	3	6.0	52.0	53.1	4.5	57.6	− 5.6	17.33	17.70	1.50	19.20	−1.87
	Average								16.74	15.83	1.51	17.34	− .6
XVI	Oct. 2–6	5	0	93.0	80.4	8.1	88.5	+ 4.5	18.60	16.08	1.62	17.70	+ .90
XVII	Oct. 7–11	5	0	92.4	80.1	6.3	86.4	+ 6.0	18.48	16.02	1.26	17.28	+1.20
XVIII	Oct. 12–14	3	0	58.2	46.4	5.9	52.3	+ 5.9	19.40	15.47	1.97	17.44	+1.96
	Average								18.74	15.92	1.56	17.48	+1.26

[a] Calculated proportionally from 5⅓ days' collection of food.
[b] 4 days = 2.5; 2 days = 3.
[c] Calculated proportionally from 3 days' collection of food.

Nitrogen balance, food, urine, and feces—Continued.

SUBJECT III O.

No.	Date (1908).	Number of days of period.	Daily dose of sodium benzoate.	Nitrogen. For period. In food.	For period. In urine.	For period. In feces.	For period. In urine and feces.	For period. Balance.	Daily average. In food.	Daily average. In urine.	Daily average. In feces.	Daily average. In urine and feces.	Daily average. Balance.
			Gms.	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*	*Gms.*
I	May 27-June 5	10	0	......	131.5	12.7	144.2	......	......	13.15	1.27	14.42	......
I A	June 6-17	12	0	......	152.6	14.0	166.6	......	......	12.72	1.17	13.89	......
II	June 18-25	8	0	112.5	102.4	11.0	113.4	−0.9	14.06	12.80	1.37	14.17	−0.11
	Average	......	......	......	......	......	......	......	14.06	12.88	1.26	14.16	− .11
III	June 29-July 5	7	.60	......	96.4	11.1	107.5	......	......	13.77	1.59	15.36	......
III A	July 6-9	4	.45	......	62.6	6.6	69.2	......	......	15.65	1.65	17.30	......
IV	July 10-16	7	.45	......	105.9	9.7	115.6	......	......	15.13	1.39	16.52	......
V	July 17-23	7	.45	......	98.4	10.5	108.9	......	......	14.06	1.50	15.56	......
VI	July 24-30	7	.45	......	101.2	11.2	112.4	......	......	14.46	1.60	16.06	......
VII	July 31-Aug. 6	7	.45	106.2	95.4	12.5	107.9	−1.7	15.17	13.63	1.78	15.41	− .24
VIII	Aug. 7-13	7	.45	......	104.6	12.2	116.8	......	......	14.94	1.74	16.68	......
IX	Aug. 14-20	7	.45	......	95.4	12.2	107.6	......	......	13.63	1.74	15.37	......
X	Aug. 21-27	7	.45	116.8	107.1	11.7	118.8	−2.0	16.69	15.30	1.67	16.97	− .28
	Average	......	......	......	......	......	......	......	15.93	14.45	1.63	16.08	− .26
XI	Sept. 2-8	7	0.6	......	100.7	12.6	113.3	......	......	14.39	1.80	16.19	......
XII	Sept. 9-15	7	1.0	......	107.2	9.7	116.9	......	......	15.31	1.39	16.70	......
XIII	Sept. 16-22	7	1.5	133.1	116.0	12.1	128.1	+5.0	19.01	16.57	1.73	18.30	+ .71
XIV	Sept. 23-28	6	(a)	......	82.4	9.6	92.0	......	......	13.73	1.60	15.33	......
XV	Sept. 29-Oct. 1	3	6.0	53.6	44.2	4.6	48.8	−4.8	17.87	14.73	1.54	16.27	+1.60
	Average	......	......	......	......	......	......	......	18.67	15.02	1.62	16.64	+ .98
XVI	Oct. 2-6	5	0	......	64.8	6.9	71.7	......	......	12.96	1.38	14.34	......
XVII	Oct. 7-11	5	0	83.3	74.2	7.9	82.1	+1.2	16.66	14.84	1.58	16.42	+ .24
XVIII	Oct. 12-15	4	0	......	60.2	5.2	65.4	......	......	15.05	1.30	16.35	......
	Average	......	......	......	......	......	......	......	16.66	14.24	1.43	15.67	+ .24

SUBJECT IV L.

No.	Date (1908).	Number of days of period.	Daily dose of sodium benzoate.	Nitrogen. For period. In food.	For period. In urine.	For period. In feces.	For period. In urine and feces.	For period. Balance.	Daily average. In food.	Daily average. In urine.	Daily average. In feces.	Daily average. In urine and feces.	Daily average. Balance.
I	June 14-20	7	0	......	121.1	13.3	134.4	......	......	17.30	1.90	19.20	......
II	June 21-27	7	0	112.0	110.9	12.0	122.9	−10.9	16.00	15.84	1.71	17.55	−1.55
	Average	......	......	112.0	116.0	12.7	128.7	−10.9	16.00	16.57	1.81	18.38	−1.56
III	July 3-9	7	.3	......	95.2	11.8	107.0	......	......	13.60	1.68	15.28	......
IV	July 10-16	7	.3	......	92.2	11.1	103.3	......	......	13.17	1.59	14.76	......
V	July 17-23	7	.3	......	95.2	9.5	104.7	......	......	13.60	1.36	14.96	......
VI	July 24-30	7	.3	......	90.5	10.8	101.3	......	......	12.93	1.54	14.47	......
VII	July 31-Aug. 6	7	.3	101.3	92.2	10.0	102.2	− .9	14.47	13.17	1.43	14.60	− .13
VIII	Aug. 7-13	7	.3	......	90.2	12.4	102.6	......	......	12.89	1.77	14.66	......
IX	Aug. 14-20	7	.3	......	98.8	13.4	112.2	......	......	14.11	1.91	16.02	......
X	Aug. 21-27	7	.3	89.1	108.2	10.0	118.2	−29.1	12.73	15.46	1.43	16.89	−4.16
	Average	......	......	95.2	95.3	11.1	106.4	−15.0	13.60	13.61	1.59	15.20	−2.14
XI	Sept. 2-8	7	.6	......	101.6	14.2	115.8	......	......	14.51	2.03	16.54	......
XII	Sept. 9-15	7	1.0	......	95.5	10.6	106.1	......	......	13.64	1.51	15.15	......
XIII	Sept. 16-22	7	1.5	114.7	109.4	9.9	119.3	− 4.6	16.39	15.63	1.41	17.04	− .65
XIV	Sept. 23-28	6	(c)	......	88.1	10.4	98.5	......	......	14.67	1.73	16.40	......
XV	Sept. 29-Oct. 1	3	6.0	55.9	47.9	3.9	51.8	+ 4.1	18.64	15.97	1.30	17.27	+1.37
	Average	......	......	......	......	......	......	......	17.06	14.75	1.63	16.38	−1.99
XVI	Oct. 2-6	5	0	......	66.0	8.2	74.2	......	......	13.20	1.64	14.84	......
XVII	Oct. 7-11	5	0	83.7	70.0	6.6	76.6	+ 7.1	16.74	14.00	1.32	15.32	+1.42
XVIII	Oct. 12-14	4	0	......	54.4	5.8	60.2	......	......	13.60	1.45	15.05	......
	Average	......	......	......	......	......	......	......	16.74	13.60	1.47	15.07	+1.42

a 4 days=2.5; 2 days=3.

SERIES G.

Fats, fatty acids, and soaps in food and feces.

SUBJECT I R.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate (in grams).	Food.								Feces.																	Food.		
				For total period, in grams.			Daily average, in grams.			In per cent of total fats.		For total period, in grams.					Daily average, in grams.					In per cent of dried feces.				In per cent of total fats.			Daily average.		
																													Total fats assimilated (in grams).	In per cent of total fats.	
				Total fats.	Neutral fats.	Free fatty acids.	Total fats.	Neutral fats.	Free fatty acids.	Neutral fats.	Free fatty acids.	Dried.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Dried.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Neutral fats.	Fatty acids.	Fatty acids of soaps.		Burned or assimilated.	Nonassimilated.
I	June 15–22	8	0	...	...	...	...	...	...	...	...	239.7	49.4	32.8	9.3	7.3	30.0	6.17	4.1	1.16	0.91	20.6	13.67	3.86	3.07	66.4	18.7	14.9	...	...	...
II	June 23–28	6	0	540.0	520.1	19.9	90.0	86.7	3.3	96.3	3.7	194.8	34.2	23.8	7.7	2.7	32.5	5.7	3.97	1.24	.45	17.5	12.18	3.96	1.36	69.6	22.6	7.8	84.3	93.7	6.3
	Average	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31.0	5.96	4.04	1.21	.71	19.2	13.0	3.9	2.3	67.8	20.3	11.7	84.3	93.7	6.3
III	July 3–9	7	.3	...	...	...	...	...	...	...	...	242.4	...	35.1	7.2	...	34.6	...	5.01	1.03	...	...	14.42	2.98	...	...	...	...	...	...	...
IV	July 10–16	7	.3	...	...	...	...	...	...	...	...	228.0	...	23.6	5.4	...	32.6	...	3.37	.77	...	...	10.35	2.35	...	...	...	...	...	...	...
V	July 17–23	7	.3	770.0	744.8	25.2	110.0	106.4	3.6	96.7	3.3	207.4	41.8	30.1	8.3	3.4	29.6	5.97	4.30	1.19	.48	20.2	14.53	4.00	1.67	71.9	19.8	8.3	104.0	94.6	5.4
VI	July 24–30	7	.3	765.0	716.4	48.6	109.3	102.4	6.9	93.7	6.3	171.3	43.6	32.0	8.5	3.1	24.5	6.23	4.57	1.21	.45	25.4	18.65	4.94	1.81	73.4	19.5	7.1	103.1	94.3	5.7
VII	July 31–Aug. 6	7	.3	695.8	662.0	33.8	99.4	94.6	4.8	95.2	4.8	183.3	37.9	31.1	4.3	2.5	26.2	5.41	4.44	.61	.36	20.6	16.91	2.32	1.37	82.1	11.3	6.6	94.0	94.5	5.5
VIII	Aug. 7–13	7	.3	685.0	646.5	38.5	97.9	92.4	5.5	94.4	5.6	178.0	38.8	31.4	5.5	1.9	25.4	5.54	4.48	.79	.27	21.8	17.63	3.09	1.08	80.8	14.2	5.0	92.3	94.3	5.7
IX	Aug. 14–20	7	.3	a 872.1	a 826.9	a 45.2	124.6	118.1	6.5	94.8	5.2	188.7	43.0	33.6	6.1	3.3	27.0	6.14	4.80	.87	.47	22.8	17.81	3.22	1.77	78.1	14.1	7.8	118.4	95.1	4.9
X	Aug. 21–27	7	.3	653.9	621.8	32.1	93.4	88.8	4.6	95.1	4.9	113.3	25.8	19.7	4.5	1.0	16.2	3.09	2.82	.64	.23	22.7	17.31	4.00	1.39	76.3	17.0	6.1	89.7	96.0	4.0
	Average (V–X)	...	...	...	...	...	105.8	100.5	5.3	95.0	5.0	...	...	...	...	...	24.8	5.50	4.24	.88	.38	22.2	17.1	3.7	1.5	77.1	16.0	6.9	100.3	94.8	5.2

XI	Sept. 2-8......	7	.6	600.8	544.5	56.3	85.8	77.8	8.0	90.6	9.4	201.9	41.3	34.2	4.9	2.2	28.8	5.90	4.89	.70	.31	20.5	16.97	2.44	1.09	82.8	11.9	5.3	80.0	93.1	6.9
XII	Sept. 9-15.....	7	1.0	615.9	535.9	80.3	88.0	76.5	11.5	87.0	13.0	152.4	31.9	25.3	4.1	2.5	21.8	4.56	3.62	.58	.36	20.9	16.61	2.68	1.61	79.5	12.8	7.7	83.4	94.8	5.2
XIII	Sept. 16-22.....	7	1.5	682.0	606.6	75.4	97.5	86.7	10.8	89.0	11.0	193.6	35.8	29.0	4.9	1.9	27.7	5.11	4.14	.70	.27	18.5	14.97	2.52	1.01	80.9	13.6	5.5	92.3	94.7	5.3
XIV	Sept. 23-28.....	6	(b)	690.7	656.3	34.4	115.1	109.4	5.7	95.0	5.0	123.7	25.4	17.6	4.4	3.4	20.6	4.24	2.93	.74	.57	20.5	14.21	3.56	2.73	69.3	17.4	13.3	110.9	96.3	3.7
XV	Sept. 29-Oct. 1.	3	6.0	331.5	297.5	34.0	110.5	99.2	11.3	89.7	10.3	94.8	24.1	16.5	3.5	4.1	31.6	8.03	5.50	1.16	1.37	22.8	15.61	3.35	3.84	68.5	14.7	16.8	102.5	92.7	7.3
	Average.	....	....	......	......	.....	97.3	88.0	9.3	90.4	9.6	.....	.....	.....	....	....	25.5	5.28	4.09	.73	.47	20.8	16.0	2.9	1.8	77.4	13.7	8.9	92.1	94.5	5.5
XVI	Oct. 2-6.......	5	0	492.3	463.2	29.1	98.5	92.7	5.8	96.1	3.9	112.5	26.4	18.4	5.4	2.6	22.5	5.28	3.68	1.08	.52	23.4	16.31	4.76	2.33	69.7	20.3	10.0	93.2	94.6	5.4
XVII	Oct. 7-11......	5	0	545.4	508.3	37.1	109.1	101.7	7.4	93.2	6.8	107.7	23.9	17.4	4.7	1.8	21.5	4.78	3.48	.94	.36	22.2	16.18	4.32	1.70	73.0	19.4	7.6	104.3	95.6	4.4
XVIII	Oct. 12-15.....	4	0	403.9	370.3	33.6	101.0	92.6	8.4	91.7	8.3	94.2	24.3	17.4	4.6	2.3	23.6	6.08	4.35	1.15	.58	25.8	18.49	4.85	2.46	71.6	18.8	9.6	94.9	94.0	6.0
	Average.	....	....	......	......	.....	103.0	95.8	7.2	93.0	7.0	.....	.....	.....	....	....	22.5	5.33	3.80	1.05	.48	23.7	16.9	4.6	2.1	71.3	19.7	9.0	97.6	94.4	5.6

a Calculated proportionally from five and one-third days' collection of food.

b 4 days=2.5; 2 days=3.

Fats, fatty acids, and soaps in food and feces—Continued.

SUBJECT II H.

				Food.								Feces.																	Food.		
				For total period, in grams.			Daily average, in grams.			In per cent of total fats.		For total period, in grams.					Daily average, in grams.					In per cent of dried feces.				In per cent of total fats.			Daily average.		
																														In per cent of total fats.	
No.	Date (1908).	Number of days.	Daily dose of sodium benzoate (in grams).	Total fats.	Neutral fats.	Free fatty acids.	Total fats.	Neutral fats.	Free fatty acids.	Neutral fats.	Free fatty acids.	Dried.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Dried.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Neutral fats.	Fatty acids.	Fatty acids of soaps.	Total fats assimilated (in grams).	Burned or assimilated.	Nonassimilated.
I	June 16–23.....	8	0	......	......	....	.....	......	....	....	....	184.6	33.9	22.0	5.2	6.7	23.3	4.24	2.75	0.65	0.84	18.2	11.8	2.8	3.6	64.8	15.4	19.8	....	....	....
II	June 24–29.....	6	0	603	559.8	43.2	100.5	93.3	6.2	92.9	7.1	143.4	19.9	11.7	4.9	3.3	23.9	3.32	1.95	.82	.55	13.9	8.2	3.4	2.3	59.0	24.5	16.5	97.2	96.7	3.3
	Average.	....	....	......	......	....	.....	......	....	....	....	....	....	....	....	....	23.4	3.84	2.41	.72	.71	16.4	10.3	3.1	3.0	62.8	18.7	18.5	97.2	96.7	3.3
III	July 3–9.......	7	.45	......	......	....	.....	......	....	....	....	226.5	....	36.2	9.1	....	32.4	....	5.17	1.3	....	....	16.0	4.0	....	....	....	....	....	....	....
IV	July 10–16.....	7	.45	......	......	....	.....	......	....	....	....	237.7	....	26.6	3.8	....	33.9	....	3.80	.54	....	....	11.2	1.6	....	....	....	....	....	....	....
V	July 17–23.....	7	.45	1,068.0	1,001.0	67.0	152.6	143.0	9.6	93.7	6.3	187.5	38.8	25.0	8.8	5.0	26.8	5.54	3.57	1.26	.71	20.7	13.3	4.7	2.7	64.3	22.7	13.0	147.0	96.4	3.6
VI	July 24–30.....	7	.45	746.3	705.0	41.3	106.6	100.7	5.9	94.5	5.5	184.8	33.1	22.6	3.5	7.0	26.4	4.73	3.23	.50	1.0	17.9	12.2	1.9	3.8	68.2	10.6	21.2	101.9	95.6	4.4
VII	July 31–Aug. 6.	7	.45	933.0	889.6	43.4	133.3	127.1	6.2	95.3	4.7	180.0	35.3	20.7	7.0	7.6	25.7	5.04	2.96	1.0	1.08	19.6	11.5	3.9	4.2	58.7	19.9	21.4	128.3	96.2	3.8
VIII	Aug. 7–13.....	7	.45	1,159.4	1,108.6	50.8	165.6	158.4	7.2	95.6	4.4	190.7	45.2	32.8	5.7	6.7	27.2	6.46	4.69	.81	.96	23.7	17.2	3.0	3.5	72.5	12.7	14.8	159.2	96.1	3.9
IX	Aug. 14–20.....	7	.45	985.6	938.8	46.8	140.8	134.1	6.7	95.3	4.7	168.2	42.6	30.3	4.5	7.8	24.0	6.08	4.33	.64	1.11	25.3	18.0	2.7	4.6	71.1	10.7	18.2	134.7	95.7	4.3
X	Aug. 21–27.....	7	.45	1,081.0	1,028.1	52.9	154.4	146.9	7.5	95.1	4.9	146.8	36.1	25.8	4.3	7.8	21.0	5.16	3.69	.61	.86	24.6	17.6	2.9	4.1	71.5	11.8	16.7	149.3	96.7	3.3
	Average (V–X).	....	....	......	......	....	142.2	135.0	7.2	94.9	5.1	....	....	....	....	....	25.2	5.50	3.74	.80	.96	21.8	14.8	3.2	3.8	68.0	14.6	17.4	136.7	96.1	3.9

XI	Sept. 2-8......	7	.60	914.3	858.6	55.7	130.6	122.7	7.9	93.9	6.1	181.1	36.3	29.4	4.2	2.7	25.9	5.19	4.20	.6	.39	20.0	16.2	2.3	1.5	81.0	11.5	7.5	125.4	96.0	4.0
XII	Sept. 9-15......	7	1.0	1,072.7	1,017.2	55.5	153.2	145.3	7.9	95.0	5.0	167.4	42.7	32.8	6.7	3.2	23.9	6.10	4.69	.96	.45	25.5	19.6	4.0	1.9	76.8	15.7	7.5	147.1	96.0	4.0
XIII	Sept. 16-22....	7	1.5	1,071.8	984.4	87.4	153.1	140.6	12.5	92.2	7.8	178.4	38.0	28.0	5.9	4.1	25.5	5.43	4.00	.84	.59	21.3	15.7	3.3	2.3	73.7	15.5	10.8	147.4	96.5	3.5
XIV	Sept. 23-28.....	6	(a)	b 414.4	b 378.0	b36.4	138.1	126.0	12.1	91.2	8.8	230.5	50.3	30.7	9.2	10.4	38.4	8.38	5.12	1.53	1.73	21.8	13.3	4.0	4.5	61.1	18.3	20.6	60.7	94.0	6.0
XV	Sept. 29-Oct. 1.	3	6.0	469.7	442.1	27.6	156.6	147.4	9.2	94.1	5.9	78.4	20.7	13.7	3.4	3.6	26.1	6.90	4.57	1.13	1.20	26.5	17.5	4.4	4.6	66.0	16.6	17.4	149.7	95.6	4.4
	Average.	....	....	....	....	.....	131.4	122.7	8.7	93.4	6.6	.....	.....	....	....	....	27.8	6.27	4.49	.98	.80	22.5	16.1	3.5	2.9	71.7	15.6	12.7	125.2	95.6	4.4
XVI	Oct. 2-6.......	5	0	775.3	724.8	50.5	155.1	145.0	10.1	93.5	6.5	159.1	36.8	24.0	7.2	5.6	31.8	7.36	4.80	1.44	1.12	23.1	15.1	4.5	3.5	65.3	19.5	15.2	147.7	95.2	4.8
XVII	Oct. 7-11......	5	0	749.3	687.5	61.8	149.9	137.5	12.4	91.7	8.3	122.3	26.7	18.5	5.0	3.2	24.5	5.34	3.70	1.0	.64	21.8	15.1	4.1	2.6	60.3	18.8	11.9	144.5	96.6	3.4
XVIII	Oct. 12-14.....	3	0	439.0	411.5	27.5	146.3	137.2	9.1	93.7	6.3	108.3	23.2	16.0	4.7	2.5	36.1	7.73	5.33	1.57	.83	21.4	14.8	4.3	2.3	69.2	20.1	10.7	138.6	94.8	5.2
	Average.	....	....	....	....	.....	151.1	140.3	9.8	92.8	7.2	.....	.....	....	....	....	30.0	6.67	4.50	1.30	.87	22.2	15.0	4.3	2.9	67.5	19.5	13.0	144.4	95.6	4.4

a 4 days=2.5; 2 days=3.

b Based on three days' collection of food.

Fats, fatty acids, and soaps in food and feces—Continued.

SUBJECT III O.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate (in grams).	Food.								Feces.																	Food.		
				For total period, in grams.			Daily average, in grams.			In per cent of total fats.		For total period, in grams.					Daily average, in grams.					In per cent of dried feces.				In per cent of total fats.			Daily average.		
																														In per cent of total fats.	
				Total fats.	Neutral fats.	Free fatty acids.	Total fats.	Neutral fats.	Free fatty acids.	Neutral fats.	Free fatty acids.	Dried.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Dried.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Neutral fats.	Fatty acids.	Fatty acids of soaps.	Total fats assimilated (in grams).	Burned or assimilated.	Nonassimilated.
I	May 27–June 5	10	0	....	....	....	....	....	....	....	....	200.4	....	18.2	8.8	....	20.8	....	1.82	0.88	....	....	9.1	4.4	....	....	....	....	....	....	....
IA	June 6–17	12	0	....	....	....	....	....	....	....	....	208.5	....	25.9	5.0	....	17.4	....	2.16	.41	....	....	12.4	2.4	....	....	....	....	....	....	....
II	June 18–25	8	0	847.5	782.0	65.5	105.3	97.8	8.19	92.3	7.7	166.1	37.9	26.0	6.0	5.9	20.8	4.74	3.25	.75	0.74	22.8	15.61	3.63	3.56	68.5	15.9	15.6	101.2	95.5	4.5
	Average	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	19.2	....	2.34	.66	....	....	12.2	3.5	....	....	....	....	....	....	....
III	June 29–July 5	7	.60	....	....	....	....	....	....	....	....	142.3	....	20.1	4.5	....	20.4	....	2.87	.64	....	....	14.13	3.17	....	....	....	....	....	....	....
IIIA	July 6–9	4	.45	....	....	....	....	....	....	....	....	95.1	20.5	13.9	2.9	3.7	23.8	5.13	3.48	.72	.93	21.6	14.67	3.03	3.90	67.9	14.0	18.1	....	....	....
IV	July 10–16	7	.45	....	....	....	....	....	....	....	....	166.6	....	32.7	5.2	....	23.8	....	4.67	.74	....	....	19.64	3.16	....	....	....	....	....	....	....
V	July 17–23	7	.45	....	....	....	....	....	....	....	....	175.2	....	35.3	6.1	....	25.0	....	5.04	.87	....	....	20.12	3.48	....	....	....	....	....	....	....
VI	July 24–30	7	.45	....	....	....	....	....	....	....	....	190.2	....	33.1	5.1	....	27.2	....	4.73	.73	....	....	17.39	2.71	....	....	....	....	....	....	....
VII	July 31–Aug. 6	7	.45	891.5	828.1	63.4	127.4	118.3	9.06	92.9	7.1	201.5	44.8	26.4	6.1	12.3	28.8	6.40	3.77	.87	1.76	22.2	13.1	3.0	6.1	59.0	13.5	27.5	121.0	95.0	5.0
VIII	Aug 7–13	7	.45	....	....	....	....	....	....	....	....	194.6	44.8	32.2	5.0	7.6	27.8	6.40	4.60	.71	1.09	23.0	16.56	2.54	3.9	72.0	11.1	16.9	....	....	....
IX	Aug 14–20	7	.45	....	....	....	....	....	....	....	....	190.5	42.7	31.5	4.0	7.2	27.2	6.10	4.50	.57	1.03	22.4	16.53	2.12	3.75	73.7	9.5	16.8	....	....	....
X	Aug. 21–27	7	.45	835.5	792.6	42.9	119.4	113.2	6.13	94.9	5.1	184.9	43.1	32.3	3.0	7.8	26.4	6.16	4.61	.43	1.12	23.3	17.45	1.62	4.23	74.9	7.0	18.1	113.2	94.9	5.1
	Average	....	....	....	....	....	123.3	115.8	7.60	93.9	6.1	....	....	....	....	....	[a]27.6	6.26	[a]4.37	[a].64	1.25	22.7	[a]15.8	[a]2.3	4.5	69.8	10.2	20.0	....	....	....

XI	Sept. 2–8	7	.60	...	...	...	...	...	...	...	...	183.8	35.9	28.0	5.0	2.9	26.3	5.13	4.0	.71	.42	19.5	15.22	2.72	1.56	78.0	14.0	8.0	...	...	...
XII	Sept. 9–15	7	1.0	...	...	...	...	...	...	...	...	155.5	31.4	23.9	4.9	2.6	22.2	4.48	3.41	.70	.37	20.2	15.35	3.18	1.67	76.0	15.7	8.3	...	...	...
XIII	Sept. 16–22	7	1.5	897.0	842.4	54.6	128.1	120.3	7.80	93.9	6.1	200.2	54.6	41.9	8.7	4.0	28.6	7.80	5.99	1.24	.57	27.3	20.96	4.36	1.98	76.7	16.0	7.3	106.1	94.0	6.0
XIV	Sept. 23–28	6	(b)	...	...	...	...	...	...	...	...	149.3	30.0	16.9	4.2	8.9	24.9	5.0	2.82	.70	1.48	20.1	11.3	2.82	5.98	56.2	14.0	29.8	...	...	...
XV	Sept. 29–Oct. 1	3	6.0	366.0	348.2	17.8	122.0	116.1	5.93	95.1	4.9	67.6	16.1	10.6	2.6	2.9	22.5	5.33	3.53	.83	.97	23.8	15.7	3.78	4.32	66.0	15.9	18.1	116.6	95.6	4.4
	Average	...	...	...	...	...	126.3	119.0	7.3	94.2	5.8	...	...	...	...	...	c25.6	c5.60	c4.01	c.85	c.71	21.8	c15.8	c3.3	c2.8	72.1	15.2	12.7	...	...	...
XVI	Oct. 2–6	5	0	...	...	...	...	...	...	...	...	109.3	25.4	14.3	6.6	4.5	21.8	5.08	2.86	1.32	.90	23.2	13.1	6.00	4.10	56.4	25.9	17.7	...	...	...
XVII	Oct. 7–11	5	0	621.3	598.2	23.1	124.3	119.6	4.62	96.3	3.7	130.2	38.9	24.3	10.7	3.9	26.0	7.78	4.86	2.14	.78	29.8	18.62	8.20	2.98	62.5	27.5	10.0	116.5	93.7	6.3
XVIII	Oct. 12–15	4	0	...	...	...	...	...	...	...	...	85.6	26.7	17.9	7.3	1.5	21.4	6.68	4.47	1.83	.38	31.2	20.9	8.58	1.72	67.0	27.5	5.5	...	...	...
	Average	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	23.2	6.50	4.03	1.76	.71	28.0	17.4	7.5	3.1	62.0	27.1	10.9	...	...	...

a VII to X, inclusive.

b 4 days=2.5; 2 days=3.

c XI to XV, inclusive.

Fats, fatty acids, and soaps in food and feces—Continued.

SUBJECT IV L.

				Food.								Feces.																	Food.		
				For total period, in grams.			Daily average, in grams.			In per cent of total fats.		For total period, in grams.					Daily average, in grams.					In per cent of dried feces.				In per cent of total fats.			Daily average.		
																														In per cent of total fats.	
No.	Date (1908).	Number of days.	Daily dose of sodium benzoate (in grams).	Total fats.	Neutral fats.	Free fatty acids.	Total fats.	Neutral fats.	Free fatty acids.	Neutral fats.	Free fatty acids.	Dried.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Dried	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Total fats.	Neutral fats.	Free fatty acids.	Fatty acids of soaps.	Neutral fats.	Fatty acids.	Fatty acids of soaps.	Total fats assimilated (in grams).	Burned or assimilated.	Nonassimilated.
I	June 14-20.....	7	0	.....	.....	.....	.....	.....	.....	.....	...	261.9	53.4	37.5	7.3	8.6	37.4	7.63	5.36	1.04	1.23	20.4	14.33	2.78	3.29	70.2	13.5	16.3	.....	.....	....
II	June 21-27.....	7	0	834.0	811.9	22.1	119.1	116.0	3.15	97.3	2.7	220.5	37.1	22.8	6.1	8.2	31.5	5.30	3.26	.87	1.17	16.8	10.37	2.76	3.67	61.5	16.4	22.1	113.8	95.5	4.5
	Average.	...	....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	....	....	....	34.5	6.47	4.31	.96	1.20	18.7	12.5	2.8	3.5	66.6	14.8	18.6	.....	....	....
III	July 3-9.......	7	.30	.....	.....	.....	.....	.....	.....	.....	....	222.6	.....	32.5	6.8	....	31.8	.....	4.64	.97	....	.....	14.55	3.05	....	82.7	17.3	.....	.....	....	....
IV	July 10-16.....	7	.30	.....	.....	.....	.....	.....	.....	.....	....	217.6	.....	29.8	6.3	....	31.1	.....	4.26	.90	....	.....	13.72	2.88	....	82.6	17.4	.....	.....	....	....
V	July 17-23.....	7	.30	.....	.....	.....	.....	.....	.....	.....	....	164.4	.....	19.9	5.5	....	23.5	.....	2.84	.79	....	.....	12.05	3.35	....	78.3	21.7	.....	.....	....	....
VI	July 24-30.....	7	.30	.....	.....	.....	.....	.....	.....	.....	....	175.0	.....	21.1	5.9	....	25.0	.....	3.01	.84	....	.....	12.02	3.38	....	78.0	22.0	.....	.....	....	....
VII	July 31-Aug. 6.	7	.30	590.5	558.9	31.6	84.3	79.8	4.51	94.7	5.3	199.1	43.8	29.8	6.5	7.5	28.4	6.26	4.26	.93	1.07	22.0	14.97	3.27	3.76	68.1	14.8	17.1	78.1	92.6	7.4
VIII	Aug. 7-13......	7	.30	.....	.....	.....	.....	.....	.....	.....	....	225.1	37.6	25.4	6.5	5.7	32.2	5.37	3.63	.93	.81	16.7	11.30	2.89	2.51	67.7	17.3	15.0	.....	....	....
IX	Aug. 14-20.....	7	.30	.....	.....	.....	.....	.....	.....	.....	....	229.5	32.4	24.4	4.9	3.1	32.8	4.63	3.49	.70	.44	14.1	10.62	2.13	1.35	74.3	15.1	9.6	.....	....	....
X	Aug. 21-27.....	7	.30	522.5	493.6	28.9	74.6	70.5	4.13	94.3	5.7	186.2	28.8	19.8	4.2	4.8	26.6	4.11	2.83	.60	.68	15.4	10.63	2.22	2.55	69.0	14.4	16.6	70.5	94.5	5.5
	Average.	...	....	.....	.....	.....	79.5	75.2	4.32	94.6	5.4	.....	.....	....	....	....	a30.0	5.09	a3.55	a.79	.75	17.0	a11.8	a2.6	2.5	a69.8	a15.5	14.7	.....	....	....

XI	Sept. 2-8	7	.60	...	...	...	...	...	...	...	...	253.1	39.0	30.2	6.0	2.8	37.2	5.57	4.31	.86	.40	15.4	11.93	2.37	1.10	77.5	15.4	7.1	...	...	...
XII	Sept. 9-15	7	1.0	...	...	...	...	...	...	...	...	188.4	31.8	24.4	4.5	2.9	26.9	4.54	3.49	.64	.41	16.9	12.96	2.39	1.55	76.7	14.1	9.2	...	...	...
XIII	Sept. 16-22	7	1.5	717.5	688.5	29.0	102.5	98.4	4.14	96.0	4.0	172.8	29.9	22.1	4.6	3.2	24.7	4.27	3.16	.66	.45	17.3	12.77	2.68	1.85	73.8	15.5	10.7	97.9	95.8	4.2
XIV	Sept. 23-28	6	(b)	...	...	...	...	...	...	...	...	158.2	18.9	10.7	2.8	5.4	26.4	3.15	1.78	.47	.90	11.9	6.75	1.75	3.40	56.7	14.7	28.6	...	...	...
XV	Sept. 29-Oct. 1	3	6.0	508.5	486.6	21.9	169.5	162.2	7.30	95.7	4.3	67.0	18.3	12.9	2.5	2.9	22.3	6.10	4.30	.83	.97	27.3	19.19	3.75	4.36	70.3	13.7	16.0	163.4	96.4	3.6
	Average	...	...	...	...	...	122.6	117.5	5.09	95.8	4.2	...	...	...	...	...	c28.0	c4.60	c3.35	c.68	c.57	c16.4	c12.0	c2.4	c2.0	c72.8	c14.8	c12.4	...	...	...
XVI	Oct. 2-6	5	0	...	...	...	...	...	...	...	...	135.2	12.6	7.6	2.1	2.9	27.0	2.52	1.52	.42	.58	9.34	5.64	1.55	2.15	60.4	16.6	23.0	...	...	...
XVII	Oct. 7-11	5	0	469.3	431.3	38.0	93.9	86.3	7.6	92.0	8.0	123.0	20.5	13.6	3.8	3.1	24.6	4.10	2.72	.76	.62	16.61	11.0	3.09	2.52	66.2	18.6	15.2	89.8	95.6	4.4
XVIII	Oct. 12-15	4	0	...	...	...	...	...	...	...	...	101.0	19.2	13.5	3.6	2.1	25.3	4.80	3.37	.90	.53	19.0	13.36	3.56	2.08	70.4	18.8	10.8	...	...	...
	Average	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25.7	3.74	2.48	.68	.58	14.5	9.7	2.6	2.3	66.3	18.2	15.5	...	...	...

a VII to X, inclusive.

b 4 days=2.5; 2 days=3.

c XI to XV, inclusive.

SERIES H.

Caloric values of food.

SUBJECT I R.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	For total period.					Daily averages.					
				Dried food (less ash).	Fats.	Proteins.	Carbohydrates.	Calories.	Dried food (less ash).	Fats.	Proteins.	Carbohydrates.	Calories.	Calories, calculated from individual foodstuffs.
			Gms.	*Gms.*	*Gms.*	*Gms.*	*Gms.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*		
I	June 15–22	8	0	......	......	......	......	......	......	......	......	......	......	2,318
II	June 23–28	6	0	2,759	540.0	522	1,697	13,920	460.0	90.0	87.0	283.0	2,320	2,049
III	July 3–9	7	.3	......	......	......	......	......	......	......	......	......	......	2,601
IV	July 10–16	7	.3	......	......	......	......	......	......	......	......	......	......	2,406
V	July 17–23	7	.3	3,014	770.0	607	1,637	16,020	430.6	110.0	86.7	233.9	2,289	2,563
VI	July 24–30	7	.3	2,945	765.0	590	1,590	15,880	420.7	109.3	84.3	227.1	2,269	......
VII	July 31–Aug. 6	7	.3	2,829	695.8	507	1,626	15,030	404.1	99.4	72.4	232.3	2,147	......
VIII	Aug. 7–13	7	.3	2,880	685.0	548	1,647	15,180	411.4	97.8	78.3	235.3	2,169	......
IX	Aug. 14–20	7	.3	[a]3,126	[a]872.1	[a]592	[a]1,662	17,160	446.6	124.6	84.5	237.5	2,451	......
X	Aug. 21–27	7	.3	2,957	653.9	688	1,615	15,310	422.4	93.4	98.3	230.7	2,187	......
	Average	....	......	......	......	......	......	......	422.7	105.8	84.1	232.8	2,252	......
XI	Sept. 2–8	7	.6	2,902	600.8	655	1,646	13,940	414.5	85.8	93.6	235.1	1,992	......
XII	Sept. 9–15	7	1.0	2,707	615.9	605	1,486	14,140	386.7	88.0	86.4	212.3	2,020	......
XIII	Sept. 16–22	7	1.5	2,786	682.0	637	1,467	14,880	398.0	97.5	91.0	209.5	2,126	......
XIV	Sept. 23–28	6	([b])	2,879	690.7	623	1,565	15,230	479.8	115.1	103.8	260.9	2,538	......
XV	Sept. 29–Oct. 1	3	6.0	1,322	331.5	315	675	7,082	440.5	110.5	105.0	225.0	2,361	......
	Average	....	......	......	......	......	......	......	419.8	97.4	94.5	227.9	2,176	......
XVI	Oct. 2–6	5	0	2,047	492.3	486	1,069	10,830	409.6	98.5	97.2	213.9	2,166	......
XVII	Oct. 7–11	5	0	2,220	545.4	382	1,293	11,820	444.1	109.1	76.4	258.6	2,360	......
XVIII	Oct. 12–15	4	0	1,911	403.9	384	1,123	9,810	477.8	101.0	96.0	280.8	2,452	......
	Average	....	......	......	......	......	......	......	441.3	103.0	89.4	248.9	2,311	......

SUBJECT II H.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	For total period: Dried food (less ash).	Fats.	Proteins.	Carbohydrates.	Calories.	Daily averages: Dried food (less ash).	Fats.	Proteins.	Carbohydrates.	Calories.	Calories, calculated from individual foodstuffs.
I	June 16–23	7	0	......	......	......	......	......	......	......	......	......	......	2,969
II	June 24–29	6	0	2,759	603.0	540	1,616	14,680	459.8	100.5	90.0	269.3	2,470	2,682
III	July 3–9	7	.45	......	......	......	......	......	......	......	......	......	......	3,016
IV	July 10–16	7	.45	......	......	......	......	......	......	......	......	......	......	3,367
V	July 17–23	7	.45	4,800	1068.0	692	3,040	25,330	685.7	152.6	98.8	434.3	3,618	2,884
VI	July 24–30	7	.45	3,325	746.3	740	1,839	17,530	475.0	106.6	105.7	262.7	2,504	......
VII	July 31–Aug. 6	7	.45	3,985	933.0	725	2,327	21,150	569.3	133.3	103.6	332.4	3,021	......
VIII	Aug. 7–13	7	.45	4,743	1159.4	755	2,829	25,480	677.6	165.6	107.9	404.1	3,640	......
IX	Aug. 14–20	7	.45	4,803	985.6	620	3,197	24,370	686.1	140.8	88.6	456.7	3,481	......
X	Aug. 21–27	7	.45	4,776	1081.0	750	2,945	25,200	682.3	154.4	107.2	420.7	3,600	......
	Average	....	......	......	......	......	......	......	629.3	142.2	102.0	385.1	3,311	......
XI	Sept. 2–8	7	.6	3,837	914.3	642	2,281	20,500	548.1	130.6	91.7	325.8	2,928	......
XII	Sept. 9–15	7	1.0	4,485	1072.7	755	2,657	23,990	640.7	153.2	107.9	379.6	3,428	......
XIII	Sept. 16–22	7	1.5	4,326	1071.8	675	2,579	23,320	618.0	153.1	96.4	368.5	3,331	......
XIV	Sept. 23–28	6	[b]2.5	[c]1,615	[c]414.4	[c]407	[c]794	8,690	538.4	138.1	135.7	264.6	2,897	......
XV	Sept. 29–Oct. 1	3	6.0	2,110	469.7	325	1,315	11,100	703.3	156.6	108.3	438.4	3,700	......
	Average	....	......	......	......	......	......	......	606.5	146.0	104.0	356.5	3,244	......
XVI	Oct. 2–6	5	0	3,205	775.3	585	1,845	17,220	641.0	155.0	117.0	369.0	3,444	......
XVII	Oct. 7–11	5	0	3,102	749.3	580	1,773	16,640	620.4	149.8	116.0	354.6	3,328	......
XVIII	Oct. 12–14	3	0	1,563	439.0	365	759	8,700	521.0	146.3	121.7	253.0	2,900	......
	Average	....	......	......	......	......	......	......	605.4	151.0	117.7	336.7	3,274	......

[a] Calculated proportionally from $5\frac{1}{3}$ days' collection of food.
[b] 4 days=2.5; 2 days=3.
[c] Based on 3 days' collection of food.

Caloric values of food—Continued.

SUBJECT III O.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	For total period.					Daily averages.					
				Dried food (less ash).	Fats.	Proteins.	Carbohydrates.	Calories.	Dried food (less ash).	Fats.	Proteins.	Carbohydrates.	Calories.	Calories, calculated from individual foodstuffs.
			Gms.	*Gms.*	*Gms.*	*Gms.*	*Gms.*		*Gms.*	*Gms.*	*Gms.*	*Gms.*		
II	June 18-25......	8	0	2,868	847.5	704	1,316	16,150	358.5	106.0	88.0	164.5	2,019	......
VII	July 31-Aug. 6..	7	.45	3,798	891.5	565	2,341	20,180	542.6	127.5	80.7	334.4	2,883	......
X	Aug. 21-27......	7	.45	3,451	835.5	730	1,885	18,500	493.0	119.4	104.3	269.3	2,643	......
	Average....	....	.....	......	......	.....	......	......	517.8	123.5	92.5	301.8	2,763	......
XIII	Sept. 16-22......	7	1.5	3,656	879.0	832	1,945	19,700	522.3	125.6	118.9	277.8	2,814	......
XV	Sept. 29-Oct. 1..	3	6.0	1,601	366.0	335	900	8,470	533.7	122.0	111.7	300.0	2,823	......
	Average ...	....	.....	......	......	.....	......	......	525.7	124.5	116.7	284.5	2,817	......
XVII	Oct. 7-11........	5	0	2,583	621.3	521	1,441	13,820	516.6	124.2	104.2	288.2	2,764	......

SUBJECT IV L.

No.	Date (1908).	Number of days.	Daily dose of sodium benzoate.	Dried food (less ash).	Fats.	Proteins.	Carbohydrates.	Calories.	Dried food (less ash).	Fats.	Proteins.	Carbohydrates.	Calories.	Calories, calculated from individual foodstuffs.
II	June 21-27......	7	0	3,059	834.0	700	1,525	16,880	436.8	119.0	100.0	217.8	2,411	......
VII	July 31-Aug. 6..	7	.3	3,631	590.5	634	2,406	18,020	518.7	84.4	90.6	343.7	2,574	......
X	Aug. 21-27......	7	.3	2,988	522.5	558	1,907	14,975	426.8	74.7	79.7	272.4	2,139	......
	Average ...	....	.....	......	......	.....	......	......	472.7	79.5	85.1	308.1	2,357	......
XIII	Sept. 16-22......	7	1.5	3,880	717.5	718	2,444	19,650	554.2	102.5	102.6	349.1	2,807	......
XV	Sept. 29-Oct. 1..	3	6.0	1,835	508.5	350	976	10,170	611.6	169.5	116.7	325.4	3,390	......
	Average ...	....	.....	......	......	.....	......	......	571.6	122.7	106.8	342.1	2,982	......
XVII	Oct. 7-11........	5	0	2,532	469.3	523	1,540	12,835	506.4	93.8	104.6	308.0	2,567	......

SERIES I.

Hydrogen sulphide in feces.

SUBJECT I R.

Date (1908).	Total weight of moist feces.	Total solids of feces.	Total weight of hydrogen sulphide in feces.	Hydrogen sulphide of total solids of feces.	Daily dose of sodium benzoate.	Date (1908).	Total weight of moist feces.	Total solids of feces.	Total weight of hydrogen sulphide in feces.	Hydrogen sulphide of total solids of feces.	Daily dose of sodium benzoate.
	Gms.	*P. ct.*	*Gm.*	*P. ct.*	*Gms.*		*Gms.*	*P. ct.*	*Gm.*	*P. ct.*	*Gms.*
Sept. 5	......	......	......	......	0.6	Sept. 26	93.7	25.8	0.0072	0.030	2.5
6	80.9	27.6	0.011	0.046	.6	27	......	......	......	......	3.0
7	......	......	......	......	.6	28	64.4	35.1	.0104	.046	3.0
8	112.4	26.1	.0054	.018	.6	29	146.2	28.9	.051	.119	6.0
9	92.2	24.4	.0059	.026	1.0	30	148.6	15.5	.014	.060	6.0
10	......	......	......	......	1.0	Oct. 1	......	......	......	......	6.0
11	121.0	21.8	.0031	.012	1.0	2	184.0	26.0	.0092	.019	0
12	170.1	22.2	.0033	.0087	1.0	3	84.6	29.6	.014	.055	0
13	......	......	......	......	1.0	4	......	......	......	......	0
14	270.0	19.8	.0095	.018	1.0	5	......	......	......	......	0
15	......	......	......	......	1.0	6	177.0	31.0	.017	.031	0
16	......	......	......	......	1.5	7	......	......	......	......	0
17	......	......	......	......	1.5	8	104.5	31.0	.019	.059	0
18	198.5	23.4	.011	.025	1.5	9	220.3	18.3	.015	.038	0
19	129.0	21.8	.011	.039	1.5	10	......	......	......	......	0
20	262.7	15.2	.016	.039	1.5	11	233.5	28.9	.037	.054	0
21	80.5	22.6	.0085	.047	1.5	12	......	......	......	......	0
22	106.7	23.4	.0085	.034	1.5	13	......	......	......	......	0
23	147.8	24.0	.0049	.014	2.5	14	130.1	28.8	.0096	.025	0
24	......	......	......	......	2.5	15	......	......	......	......	0
25	149.5	23.9	.0054	.015	2.5	16	145.5	28.0	.0059	.016	0

SUBJECT II H.

Sept. 5	92.5	19.5	0.006	0.033	0.6	Sept. 27	......	......	......	......	3.0
6	162.5	23.3	.0069	.018	.6	28	303.0	26.6	0.045	0.056	3.0
7	......	......	......	......	.6	29	242.4	38.1	.023	.025	6.0
8	137.6	30.3	.0086	.023	.6	30	105.0	21.4	.025	.110	6.0
9	132.2	26.7	.013	.039	1.0	Oct. 1	156.1	21.7	.0102	.045	6.0
10	......	......	......	......	1.0	2	69.1	31.9	.019	.087	0
11	186.5	25.7	.0073	.015	1.0	3	......	......	......	......	0
12	......	......	......	......	1.0	4	146.3	26.8	.032	.082	0
13	95.7	29.8	.0064	.022	1.0	5	107.1	24.7	.022	.084	0
14	182.2	21.5	.0099	.023	1.0	6	175.1	18.4	.017	.052	0
15	......	......	......	......	1.0	7	125.7	27.0	.0078	.023	0
16	180.4	28.4	.022	.043	1.5		106.0	25.8	.016	.060	0
17	130.4	20.7	.014	.053	1.5	8	214.5	13.4	.0058	.020	0
18	98.0	22.9	.011	.051	1.5	9	99.7	22.4	.011	.050	0
19	......	......	......	......	1.5	10	69.3	26.6	.007	.038	0
20	......	......	......	......	1.5	11	......	......	......	......	0
21	201.8	23.5	.0085	.017	1.5	12	179.4	29.4	.016	.032	0
22	255.9	14.1	.013	.036	1.5	13	73.0	18.7	.014	.105	0
23	90.0	27.2	.015	.061	2.5	14	284.0	19.9	.031	.055	0
24	131.5	22.6	.016	.036	2.5	15	......	......	......	......	0
25	395.4	11.8	.0076	.016	2.5	16	171.0	22.2	.0083	.022	0
26	......	......	......	......	2.5						

Hydrogen sulphide in feces—Continued.

SUBJECT III O.

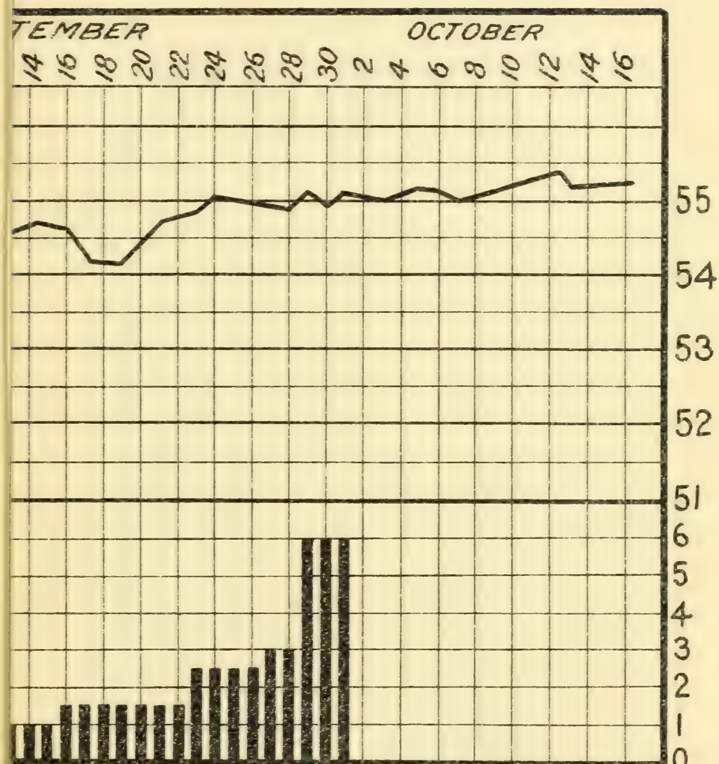
Date (1908).	Total weight of moist feces.	Total solids of feces.	Total weight of hydrogen sulphide in feces.	Hydrogen sulphide of total solids of feces.	Daily dose of sodium benzoate.	Date (1908).	Total weight of moist feces.	Total solids of feces.	Total weight of hydrogen sulphide in feces.	Hydrogen sulphide of total solids of feces.	Daily dose of sodium benzoate.
	Gms.	*P. ct.*	*Gms.*	*P. ct.*	*Gms.*		*Gms.*	*P. ct.*	*Gms.*	*P. ct.*	*Gms.*
Sept. 5	199.7	20.8	0.0076	0.018	0.6	Sept. 26	79.4	31.2	.0076	.031	2.5
6	213.0	17.3	.0082	.022	.6	27	130.2	24.5	.012	.037	3.0
7	......	......	......	......	.6	28	98.0	15.9	.0097	.062	3.0
8	126.9	19.3	.011	.046	.6	29	136.0	21.5	.050	.171	6.0
9	168.0	20.4	.016	.048	1.0	30	......	......	......	......	6.0
10	......	......	......	......	1.0	Oct. 1	171.0	24.1	.020	.047	6.0
11	247.0	17.8	.028	063	1.0	2	115.3	22.8	.034	.127	0
12	385.0	12.9	.030	.061	1.0	3	......	......	......	......	0
13	......	......	......	......	1.0	4	147.0	22.5	.038	.115	0
14	......	......	......	......	1.0	5	......	......	......	......	0
15	97.5	26.3	.026	.100	1.0	6	226.7	18.9	.026	.060	0
16	60.0	29.2	.017	.098	1.5	7	126.5	14.6	.018	.098	0
17	145.5	24.5	.018	.051	1.5	8	188.4	15.7	.024	.083	0
18	285.0	13.7	.027	.069	1.5	9	......	......	......	......	0
19	62.5	25.2	.018	.114	1.5	10	220.3	22.0	.028	.058	0
20	......	......	......	......	1.5	11	203.0	14.9	.023	.076	0
21	67.0	28.0	.0064	.034	1.5	12	146.0	14.8	.021	.096	0
22	198.0	22.9	.018	.039	1.5	13	173.0	11.3	.015	.076	0
23	......	......	......	......	2.5	14	166.7	19.5	.016	.048	0
24	88.1	26.7	.0068	.029	2.5	15	......	......	......	......	0
	163.0	11.1	.014	.076	2.5	16	118.0	28.4	.012	.036	0
25	201.0	12.3	.017	.069	2.5						

SUBJECT IV L.

Date (1908).	Total weight of moist feces.	Total solids of feces.	Total weight of hydrogen sulphide in feces.	Hydrogen sulphide of total solids of feces.	Daily dose of sodium benzoate.	Date (1908).	Total weight of moist feces.	Total solids of feces.	Total weight of hydrogen sulphide in feces.	Hydrogen sulphide of total solids of feces.	Daily dose of sodium benzoate.
Sept. 5	......	......	......	......	0.6	Sept. 26	163.5	18.8	.012	.038	2.5
6	......	......	......	......	.6	27	119.3	14.6	.013	.076	3.0
7	......	......	......	......	.6	28	105.5	25.1	.028	.104	3.0
8	110.1	27.2	0.0081	0.027	.6	29	263.0	13.1	.041	.117	6.0
9	190.7	21.4	.014	.034	1.0	30	78.3	18.2	.0038	.026	6.0
10	......	......	......	......	1.0	Oct. 1	173.4	19.2	.032	.096	6.0
11	131.2	22.8	.0067	.022	1.0	2	104.4	18.7	.015	.076	0
12	94.5	19.5	.002	.011	1.0	3	198.0	15.8	.054	.171	0
13	203.7	19.6	.015	.036	1.0	4	199.0	16.2	.048	.148	0
14	......	......	......	......	1.0	5	......	......	......	......	0
15	376.0	18.2	.046	.066	1.0	6	186.6	21.9	.029	.071	0
16	......	......	......	......	1.5	7	120.0	25.8	.017	.054	0
17	100.5	19.0	.016	.084	1.5	8	136.5	19.3	.014	.055	0
18	170.6	17.6	.036	.120	1.5	9	70.2	19.6	.0061	.045	0
19	119.0	21.2	.018	.071	1.5	10	220.0	18.2	.012	.029	0
20	97.5	24.6	.012	.050	1.5	11	......	......	......	......	0
21	137.3	13.1	.019	.105	1.5	12	155.8	27.4	.017	.039	0
22	107.3	18.9	.015	.072	1.5	13	97.5	18.8	.0072	.039	0
23	194.3	18.5	.012	.034	2.5	14	119.0	21.9	.0067	.027	0
24	165.0	17.2	.012	.041	2.5	15	125.5	22.1	.009	.044	0
25	96.8	21.0	.0014	,007	2.5	16	291.0	9.9	.012	.041	0

SERIES J.

Graphic representation of body weights.



TEMBER
OCTOBER
14
16
18
20
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24
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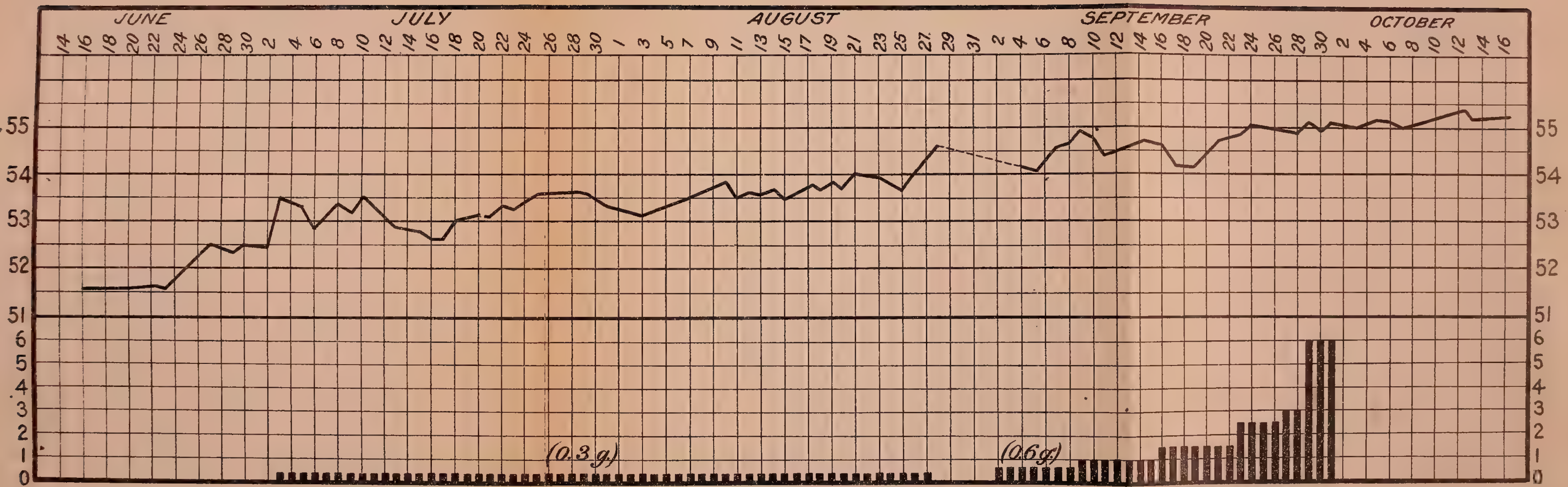
Subject IR.

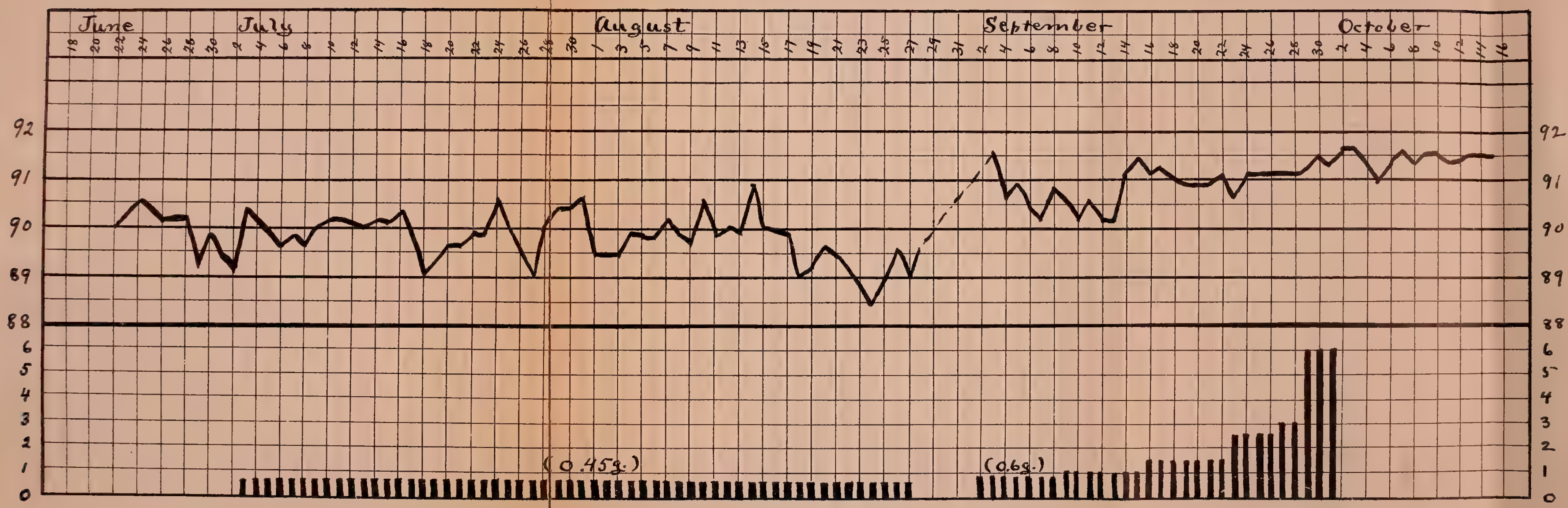


Upper.—Weight in Kilos.

Lower.—Grams of Sodium Benzoate per Day.

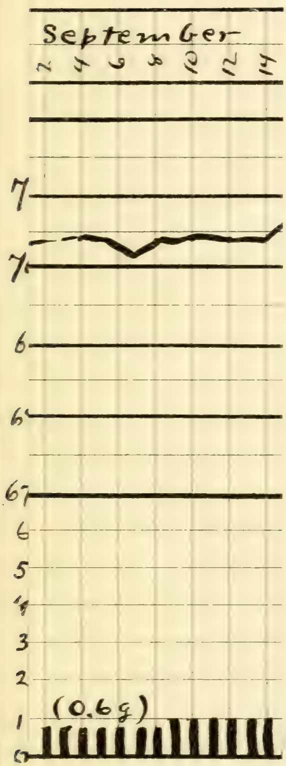

14
16
18
20
22

SUBJECT II H.

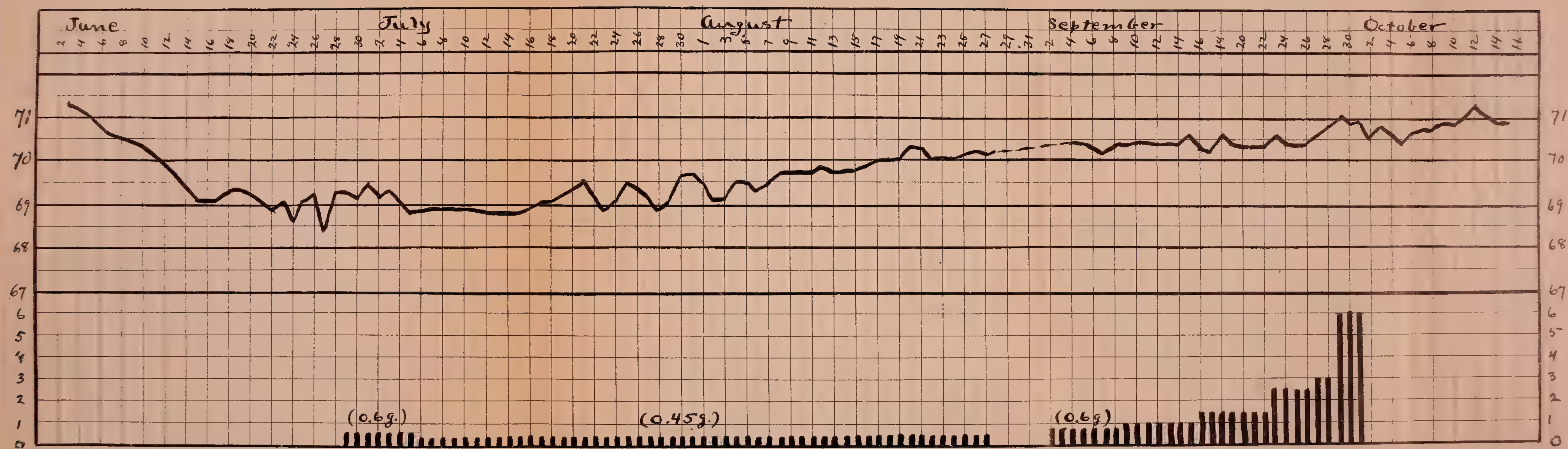


UPPER.—WEIGHT IN KILOS.

LOWER.—GRAMS OF SODIUM BENZOATE PER DAY.

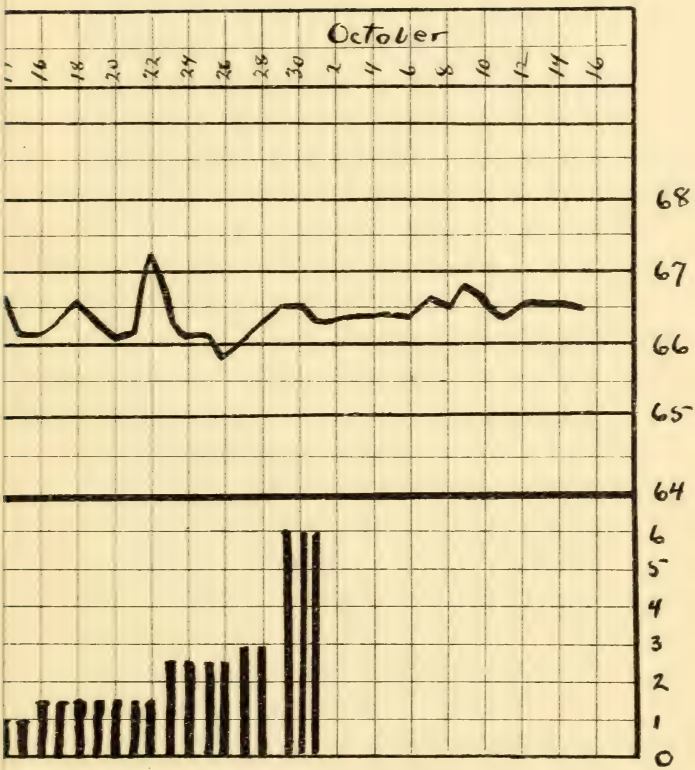

September
(0,6g)

Subject III O.



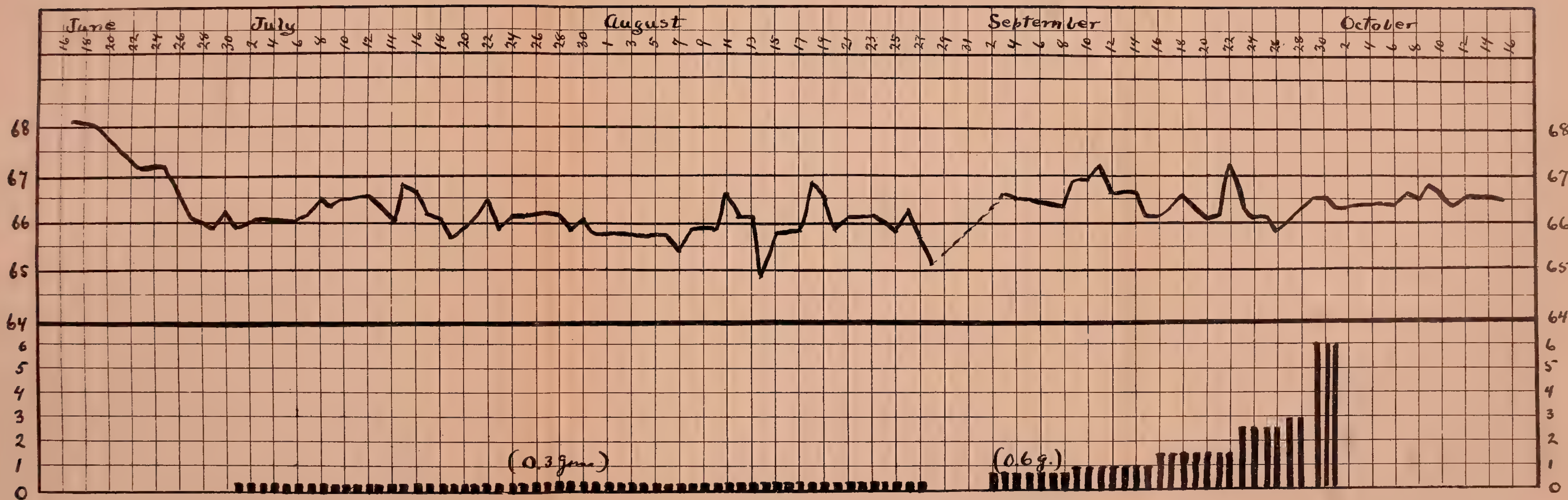
Upper.—Weight in Kilos.

Lower.—Grams of Sodium Benzoate per Day.



October
16
18
20
22
24
26
28
30
2
4
6
8
10
12
14
16
68
67
66
65
64
6
5
4
3
2
1
0

SUBJECT IV L.

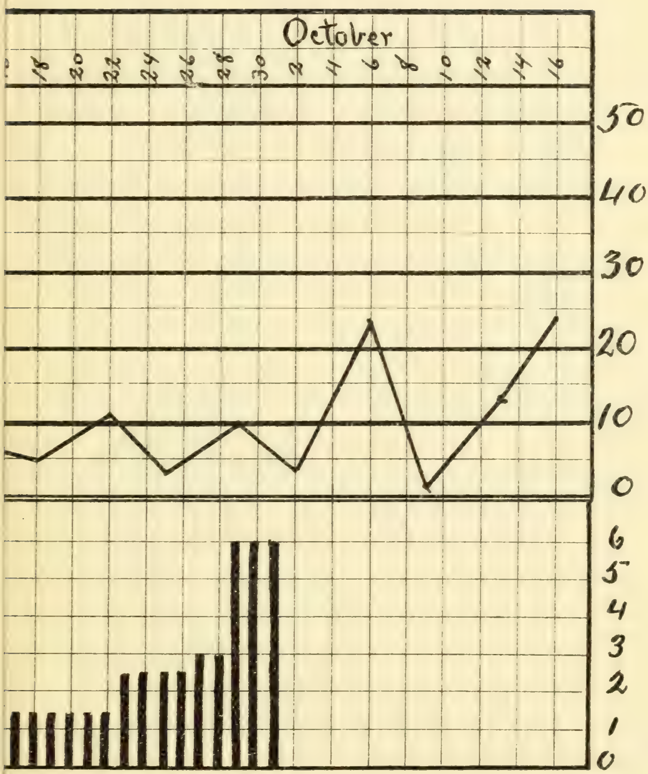


UPPER.—WEIGHT IN KILOS.

LOWER.—GRAMS OF SODIUM BENZOATE PER DAY.

SERIES K.

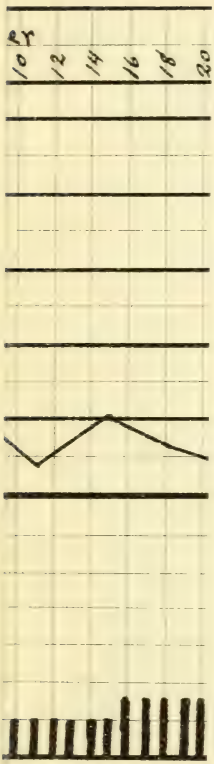
Graphic representation of gas production by fecal bacteria.


October
18
20
22
24
26
28
30
2
4
6
8
10
12
14
16
50
40
30
20
10
0
6
5
4
3
2
1
0

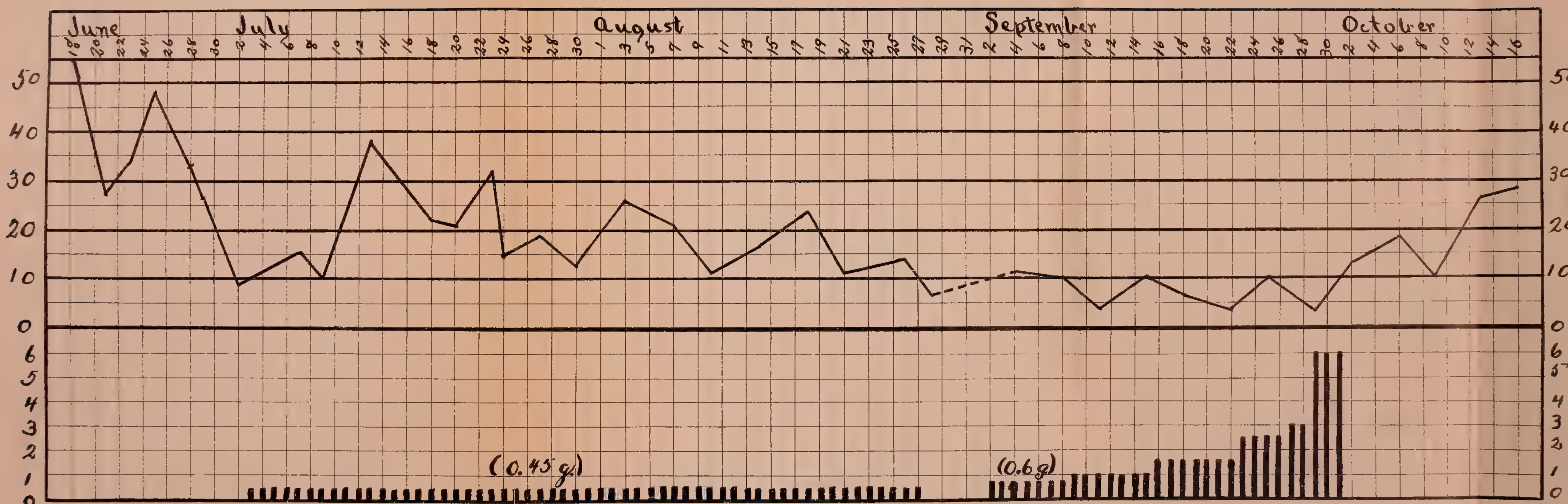
Subject IR.

Upper.—Millimeters of Gas in Dextrose Broth Fermentation Tube.

Lower.—Grams of Sodium Benzoate per Day.

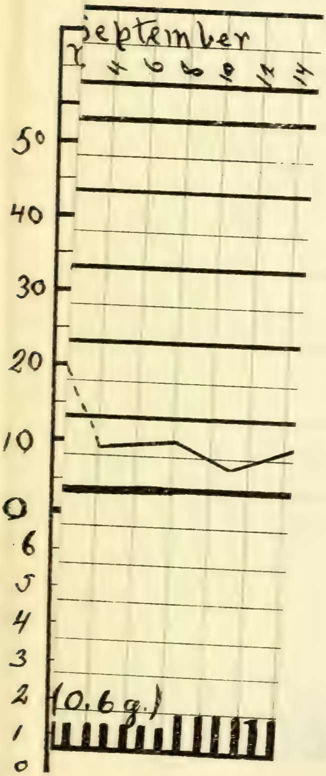

10
12
14
16
18
20

Subject II H.

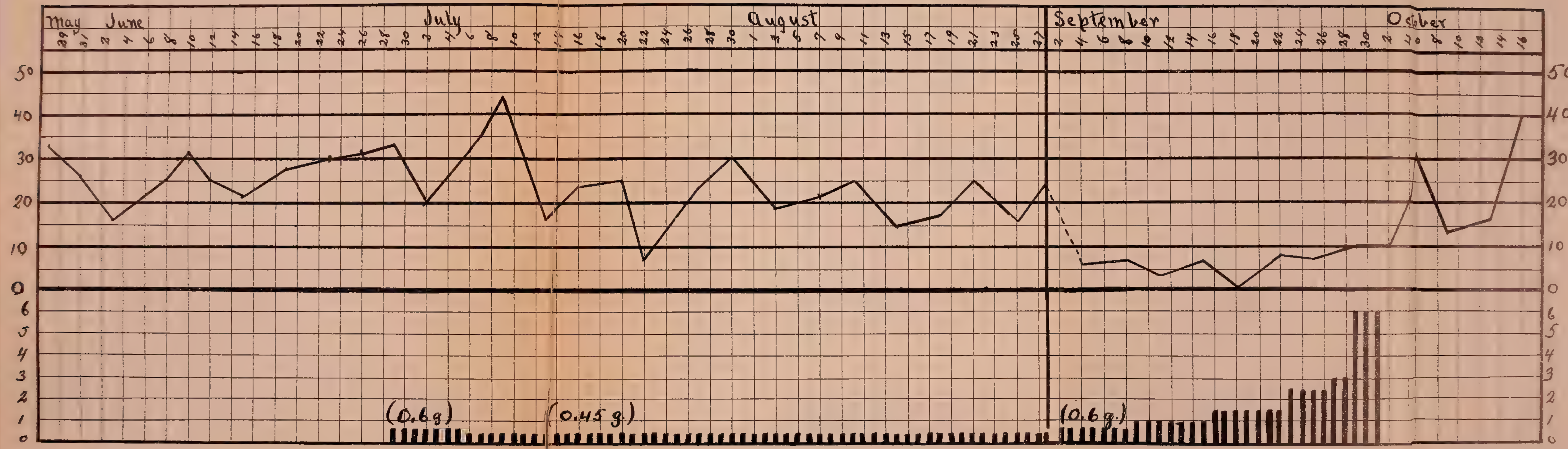


Upper.—Millimeters of Gas in Dextrose Broth Fermentation Tube.

Lower.—Grams of Sodium Benzoate per Day.

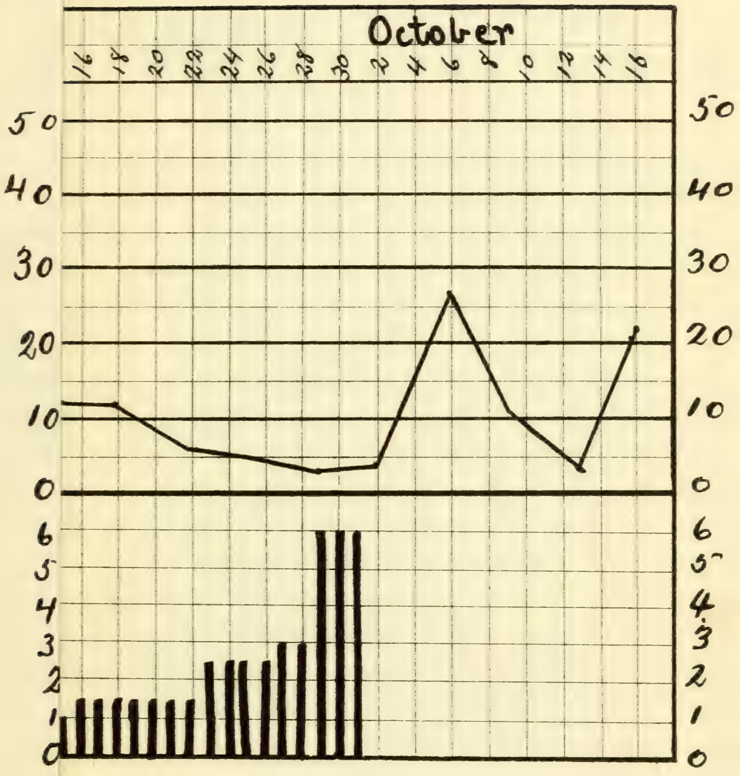

September
2 4 6 8 10 12 14
50
40
30
20
10
0
6
5
4
3
2
1
0
(0.6 g.)

Subject III O.

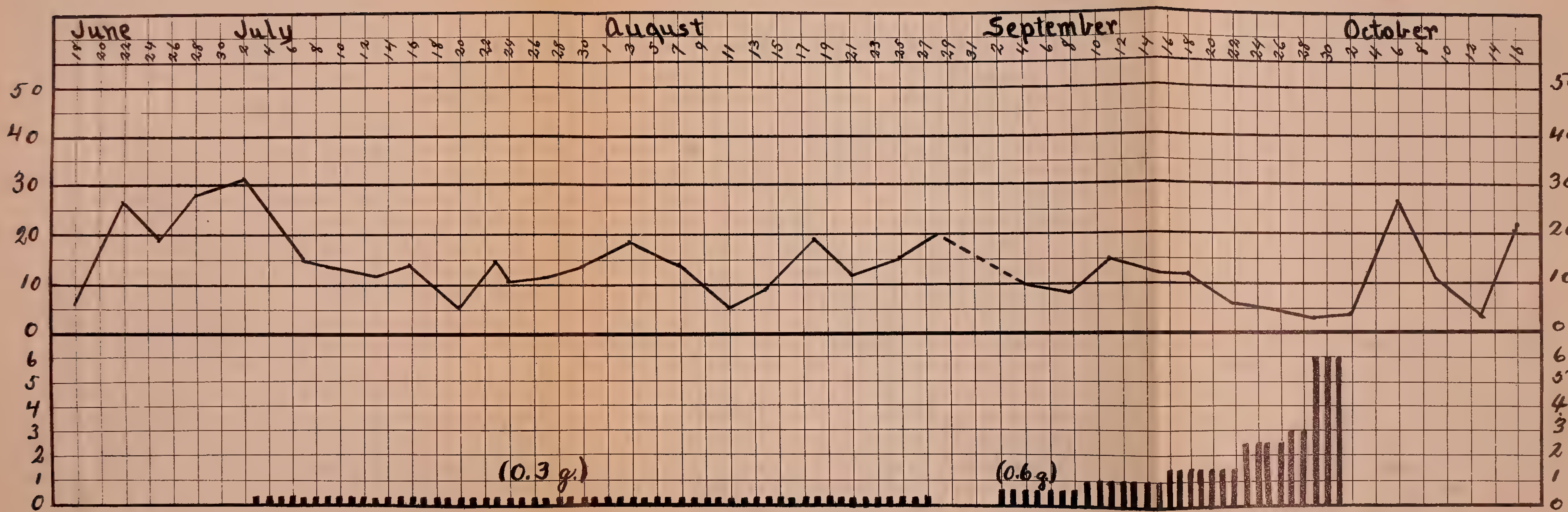


Upper.—Millimeters of Gas in Dextrose Broth Fermentation Tube.

Lower.—Grams of Sodium Benzoate per Day.


October
16 18 20 22 24 26 28 30 2 4 6 8 10 12 14 16
50 40 30 20 10 0
6 5 4 3 2 1 0

SUBJECT IV L.



UPPER.—MILLIMETERS OF GAS IN DEXTROSE BROTH FERMENTATION TUBE.

LOWER.—GRAMS OF SODIUM BENZOATE PER DAY.

SERIES L.

Clinical charts.

KEY TO CHARTS.

No. I. Complete chart of all gastric and blood work.
No. II. Average of four hemoglobin estimations, six blood counts, four differentials, and two gastric analyses in each examination of patient.
No. III. Curves showing relative weights, hemoglobin, red cells, and white cells from Chart II.
No. IV. Chart, composite curves, and averages of averages of results obtained from the four test cases.

Report No. 88, U. S. Dept. of Agriculture

CHART I

BLOOD EXAM. — Spec. from Rt. ear

Test-case number	Exam No.	Date 1908	Weight kilo's (lbs)	Appetite	Bowels	Remarks	Hb observations by	Hb% v. Fleischl	Pipette No. 3 Red cells c.mm	Leucos c.mm	Poly nuclear	Trans.	Large mono	Lympho	Baso	Eosino	Pallor	Aniso	Blood plates
III O	1	V/26	71.6 (158)	—	—	—	T	82	6,308,000	4,000	55.2	3.4	1.	39.6		.8	Slight		Few
							C	92.5	5,652,000	4,666	59.2	4.4	23.4	9.8	.8	1.8 .6			
	2	VI/18	69.8 (154)				T	79	5,504,000	4,200	51.6	3.8	1.4	41.8	.2	1.2	Consid		Few
							C	88	5,328,000	25,000	65.	5.6	3.8	23.4	2	2	About norm		
	3	VI/27	68.4 (151)				T	83	5,988,000	6,200	67	1.2	2	27.8	.2	1.8	Consid		Many
							C	88	5,436,000	5,400	67	8	1.6	20.8	.6	1.4	Slight		
	4	VII/11	68.7 (151.3)			Perfectly well	T	82	4,876,000	7,000	49.6	4.6	1	44.2	.4	.2			
							C	87	5,472,000	6,200	64	9.4	1.2	22.8	.4	2.2	About norm		
	5	VII/28	68.9 (152)			Gas last week after eating cucumbers	W	90	6,532,000	5,500	68.6	3.6	.4	26.8	.4	.2			
							C	85	5,496,000	6,700	62.2	4.4	.4	31.4	1.6		About norm		
	6	VIII/11	69.9 (154¼)		Regular	Occasionally some mucus in stools	W	92	5,476,000	4,000	75	3	2	18.6	.4	.6			
							C	83	5,424,000	6,000	65.2	11.4	.6	21.8	1.		Slight		
	7	VIII/25	69.7 (153.75)			Everything normal	V	92	6,420,000	6,700	61	7.8	.4	28.8	1		Slight		Many
							C	82	5,648,000	4,700	63.4	6.	.4	29.4	.8		Marked		
	8	IX/10	70.7 (156)			Everything normal	W	92	6,444,000	8,600	67.4	2.4	1.	32.	2.2		Slight		Mod
							C	87	5,552,000	5,300	71.6	3.4	1	21.2	2.8		Slight		+
	9	IX/23	70.8 (156.25)	Good	Regular	Feels perfectly well	W	90	7,012,000	10,600	64.4	3.8	1	30.2	.6	.6	Slight	Slight	Few
							C	90	5,776,000	9,000	67.8	2	.6	27.8	.2	1.6	Slight	Slight	
	10	X/2	70.7 (156)			Perfectly well	T	92	6,900,000	10,800	64	.8	2.6	31	.2	1.4	Slight		Mod
							C	98	5,892,000	7,300	66.6	4.6	1.2	26.2	.6	.8		Slight	
	11	X/17				Feels as well as ever	T	96	5,700,000	6,500	62.6	6	1.2	29.2		.8 .2	Slight		Mod
							C	95	5,[illegible]72,000	6,000	65.2	.6		33.2		1	Slight		
IV L	1	VI/11	68. (150)			Perfect condition	T	86	5,404,000	4,000	46.4	4	.8	47.4		1.4	Mod		Few
							C	97	5,660,000	7,222	60.4	3.4	3.8	30.8	.8	.8			
	2	VI/22	67.5 (149)			Fine	T	84	6,212,000	4,400	53.4	1.8	.8	43.4		.6	Consid	Slight	Few
							C	92.5	5,172,000	49,700	61.4	4.2	1.	32.2	.8	.4		Slight	
	3	VII/2	66.2 (146)		Little loose	Feels first-rate. Slight nausea last evening	T	79	5,924,000	6,100	55.6	3.2	.4	40		.8		Consid	Few
							C	94	5,312,000	7,100	66.6	7.6	.4	23.6	.4	1.4		Slight	
	4	VII/20	65.3 (144)		Regular	Some cramps	K	100	5,725,000	4,500	63.8	5.8	2.4	24.4	.6	3			
							C	90	5,124,000	3,400	66.	6.4	.4	25	.4	1.8			
	5	VII/31	65.3 (144)			Acute frontal sinusitis Rt. Has been feeling badly past week. Expectorates muco-pus in a.m.	K	82	5,072,000	7,000	66	2.5	1.6	28.4	1	.3			
							C	80	5,176,000	6,400	75.8	8.8	.4	13.4	.4	.8	Slight		
	6	VIII/14	65.5 (144.5)		Regular. Movements slight	Feels much better no pus expectorated today	W	92	5,552,000	4,500	55.6	1.2	.8	40		2.4	Consid		Many
							C	90	5,336,000	3,600	61.6	8.6		28		1.8	Slight		
	7	VIII/28	65.3 (144)			Feels fine	W	95	7,048,000	4,800	56.6	4	2	35.		2.4	Slight		Many
							C	97	5,752,000	5,000	62.8	10.6	.4	25		1.	Slight		
	8	IX/14	66.2 (146)		Regular	Feels perfectly well	K	96	5,856,000	5,700	53.2	6.2	3.8	33.4	.4	2.8 .2	Slight		Mod
							C	94	5,284,000	5,700	57.2	6.2	.2	33.6	.6	2.2	Slight		
	9	IX/26	65.3 (144)	Good	Regular	Feels perfectly well	W	95	6,904,000	6,000	57	4	3.	34.	.4	1.6	Slight		Mod
							C	91	5,328,000	4,400	72.4	6.8	.4	17.6	.1	1.8			
	10	X/2	66.7 (147)			Clothes slightly heavier. Perfectly well	T	90	5,804,000	6,300	68	4.4	.8	24.8	.2	1.8	Slight		Mod
							C	85	5,528,000	5,100	64.2	5.2	.6	28.2	.6	1.2	Slight	Slight	
I R	1	VI/15	51.7 (114)			Perfectly well	T	79	6,424,000	4,400	41.8	7.8	1	48	.4	1.	Consid	Slight	Many
							C	96	5,556,000	7,200	60.6	1.4	2.4	35.6					
	2	VI/23	51.7 (114)			Perfect	T	76	7,236,000	4,900	48	3.2	.6	46.8	.8	.6	Marked	Slight	Few
							C	94	5,824,000	17,200	53.8	5.4	1.6	35.2	.2	3.8	Slight		
	3	VI/30	51.9 (114.5)				T	80	6,524,000	5,000	50.8	1.2	.2	46.2	.2	1.4	Consid	Slight	Many
							C	92	5,428,000	4,400	64.4	5	1.4	26.8	.8	1.6	Slight		+
	4	VII/17	52.2 (115.5)			General condition O.K.	V	93	7,620,000	7,000	62	4.6	9.6	22	.2	1.6			
							C	90	5,680,000	5,400	66.4	8.2	1.4	21.6	.2	2.2	Slight		
	5	VII/29	54.2 (119.5)	Good	Regular		W	92	7,332,000	4,500	59.	4.8	8.	27.6	.2	.4			
							C	82	5,804,000	5,800	68.4	10	.6	25	.4	1.6	Slight		
	6	VIII/12	52.8 (116.5)	Good	Regular	Feels well	W	92	6,164,000	4,000	47.8	.8	8.	48.		2.6	Slight		Mod
							C	90	5,964,000	5,500	53.4	2.8	.4	42.4	.2	.8	Slight		
	7	VIII/26	53.9 (119)	Good	Regular	Feels pretty fair	W	88	7,516,000	7,500	42.4	2.4	2.4	51.1	.2	1.2 .2	Slight		Few
							C	87	6,468,000	4,500	53.6	7.2	1	33.6	.6	.4	Slight		
	8	IX/11	55.3 (122)	Good	Regular	Feels perfectly well	K	90	6,184,000	6,500	57.4	1.2	.6	38.4	.2	2.2	Slight		Mod
							C	87	6,024,000	8,000	60.2	2.2	1	35.2		1.2	Slight		
	9	IX/24	54.9 (121.2)	Good	Regular	Feels perfectly well	W	92	6,500,000	6,900	43.2	3	.8	51	.2	1.8	Consid	Slight	Many
							C	90	5,800,000	5,400	57.6	1.4	.4	43	.2	1.4			
	10	X/16	55.1 (121.5)			Feels better than anytime before during the Summer. Perfectly well	T	92	6,732,000	5,500	62.6	2.2	.6	31.6	.2	1.8	Slight	Slight	Few
							C	98	5,656,000	4,500	58.4	.8	.2	32.6			Slight		
II H	1	VI/16	91.0 (202)			Perfectly well	T	72	6,232,000	3,700	67.2	3	.4	28.6		.8	Mod		Mod
							C	92.5	5,252,000	11,000	75.6	5.	.6	17	.6	1.2			
	2	VI/24	90. (198)			All right	T	76	5,688,000	5,400	47.4		.4	50.6	.6	1.2	Slight		Mod
							C	87	5,196,000	5,100	57.2	5.6	.8	25.4	.4	.8	Slight		
	3	VII/2	89.6 (198)			First rate	T	71	6,056,000	7,100	60	3.2		35.2		1.0	Slight		Mod
							C	75	5,344,000	8,400	75	6	.2	17.8	.4	.6	Marked	Slight	Slight
	4	VII/18	88.9 (196)		Loose	Feels pretty well. 2 watery movements	V	86	8,048,000	3,700	75.2	3.8	1.8	19.8	.8				
							C	94	5,148,000	6,300	71.6	2.4		26					
	5	VII/30	89.9 (197.75)	Good	Regular	with flatulence. Feels very well	W	88	6,096,000	3,500	69.8	4.4	.2	23.8					
							C	84	5,204,000	7,300	70.6	9.6	1.4	18.2	.2		Slight		
	6	VIII/13	89.7 (197.75)	Good	Regular	Very well	W	78	5,840,000	5,300	55.6	3.8	.8	39.6	.2		Consid		Few
							C	74	5,180,000	5,100	70.2	4		25.4		.4	Slight		
	7	VIII/27	89.6 (197.3)	Good	Regular	Feels very well	W	85	5,808,000	5,100	62.8	1.2	1.6	34		.4			Mod
							C	85	5,108,000	4,100	64.6	6.	.8	28.4	.2	.4	Slight		
	8	IX/12	90.7 (200)	Good	Regular	Feels pretty well	K	90	5,452,000	5,600	71.4	4.0		23.[illegible]	.2	.6	Slight		Mod
							C	92	5,120,000	5,100	70	1.8		27.6	.4	.2	Marked		
	9	IX/25	91.5 (201.8)	Good	Regular	Feels perfectly well	W	90	6,328,000	8,000	65.6	6.6	.2	26.4		1.2	Slight	Slight	Few
							C	85	5,443,000	6,100	69.0	1.0		29		.8			
	10	X/5	90.4 (199.5)			Feels all right	T	82	7,496,000	8,400	62	2.8	1.6	31.6	.2	1.8	Slight		Mod
							C	92	5,[illegible]0,000	5,000	77.2	3.2	.2	20.4	.4		Slight	Slight	
	11	X/15	92.9 (203.5)			Feels perfectly well	T	90	6,632,000	9,200	65.6	3.2	.6	29.6		1.	Slight		Few
							C	97	5,152,000	5,100	64	2	.8	33	.2	.2	Slight	Slight	

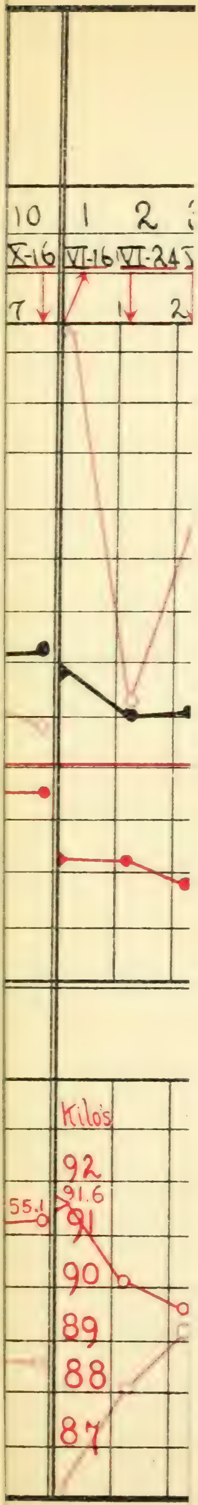
BLOOD EXAM. — Spec. from Lt. ear; GASTRIC ANALYSIS

Test-case number	Exam No.	Hb% v. Fleischl	Pipette No. 1 Red cells c.mm	Leucos c.mm	Pipette No. 2 Red cells c.mm	Leucos c.mm	Poly nuclear	Transition al	Large mono	Lympho	Baso	Eosino	Pallor	Aniso	Blood plates	Remarks	Amount cc	Filtrate cc	Odor	Lactic acid	Free HCl Mintz	Fixed HCl Winter	Total HCl Winter	Combined HCl Winter	Total acidity phenolphth.	Remarks	Observer
III O	1	87	6,256,000	7,800	5,920,000	7,500	59.6	4.6	.6	32.2	.2	2.8	Slight		Few	—	212	62		—	.057	—	—	.059	.197	—	G
		95	5,428,000	3,500	5,608,000	5,300	61	5.6	14.4	16.	.6	1.8 .6									.051			.124	.182	—	C
	2	81	5,456,000	4,300	6,404,000	6,700	54.2	3.4	1.4	39.2		1.8	Consid		Few		180	140			.138	.191	.312	.103	.219	—	G
		92	5,320,000	8,600	5,400,000	10,500	65.2	5.8	2	25.8	.2	1	About norm			Leucocytosis due to contamination of yeast cells					.116	.226	.467	.123	.211		C
	3	85	5,948,000	6,600	6,984,000	6,000	57.8	1.2	.6	39.2	.2	1.2	Consid		Many	—	300	206			.065	.240	.401	.096	.197	—	G
		86	5,488,000	4,500	5,524,000	5,000	62.2	11.8	3.	20.2		2.6 .2	Slight								.058	.197	.343	.088	.197		C
	4	87	8,560,000	6,500	11,456,000	9,000	48.2	3.2	11.	37.6						—	350	180		—	.029	.073	.226	.124	.163	—	H
		94	5,568,000	7,300	5,540,000	5,800	65.2	8.	2.4	22.	.8	1.6	About norm								.036	.182	.313	.095	.131		C
	5	85	6,440,000	6,000	7,556,000	3,000	64.	2.6	10.4	22.8	.2					—	360	300		—	.043	.109	.255	.102	.146	—	H
		84	5,600,000	7,000	5,584,000	8,000	62.4	5.	1	30.6	.2	.8	About norm								.058	.248	.343	.036	.156		C
	6	93	5,584,000	5,000	4,912,000	3,000	76.4	2.4	3.6	15.	.6	.2				—	390	225			.280	.057	.526	.246	.600	—	R
		83	5,428,000	4,200	5,388,000	4,000	64.2	11.8	.8	22.		1.2	Slight								.065	.226	.386	.095	.226		C
	7	88	5,788,000	7,200	5,428,000	6,500	64.2	3.8	2.2	28.4		1.4	Slight		Many	—	352	200			.094	.146	.321	.081	.204	—	G
		81	5,444,000	3,800	5,272,000	3,400	55.2	4.4	.4	38.8		1.2	Marked								.087	.182	.277	.007	.211		C
	8	88	5,628,000	6,400	6,156,000	7,000	65	5.4	.8	26.6		2.2	Slight		Mod	New set of pipettes used	320	200			.109	.087	.328	.132	.197	—	G
		87	5,424,000	4,800	5,372,000	4,800	63.2	5.6	1.6	27.6	.4	1.6	Slight		+						.109	.124	.321	.088	.197		C
	9	90	6,392,000	8,700	6,164,000	11,700	65.2	2.4	.4	31.6	.4		Slight	Slight	Few	Old set pipettes										—	G
		90	5,224,000	7,400	5,448,000	9,300	64.4	1.4	.2	32.6	.4	1.	Slight	Slight													C
	10	104	6,336,000	6,700	6,516,000	6,400	62.4	1	1.2	33.2		2.2	Slight	Slight	Mod	—	250	140			.124	.146	.343	.073	.233	—	G
		100	5,644,000	6,500	5,848,000	7,500	65.4	4.2	.2	29.2		1		Slight							.131	.177	.319	.011	.233		C
	11	98	5,140,000	8,200	6,692,000	9,400	64.4	5.4	.6	28.6		1.	Slight		Mod	—	350	200			.116	.146	.357	.095	.219	—	G
		98	5,576,000	6,600	5,700,000	7,600	66.4	6	.4	31.4		1.2	Slight								.102	.204	.423	.117	.2.8		C
IV L	1	87	5,616,000	5,300	5,916,000	4,400	51.4	5	.6	41.4		1.6	Mod		Few	—	130	90			.051	.182	.408	.175	.219	—	G
		97	5,952,000	8,000	5,848,000	7,600	59.4	2.6	3.2	33.8	.6	.4									.051			.146	.204	—	C
	2	85	5,524,000	4,800	5,792,000	4,000	51.2	2.4	1.4	43.6		.4	Consid		Few	—	270	120			.094	.262	.445	.089	.277		G
		88	5,036,000	9,100	5,124,000	34,400	63	5.8	1.2	27.8	.8	1.4		Slight		Leucocytes, due to contamination of yeast cells					.080	.270	.496	.146	.284		C
	3	79	5,220,000	4,300	5,648,000	3,800	55.6	4	.4	38.4		.6	Consid		Few		340	211			.073	.211	.386	.102	.160		G
		95	5,484,000	7,200			65.2	9.6	1.6	22	.6	1		Slight							.021	.306	.423	.096	.219	Exam 2 hrs. after collection	C
	4	90	4,824,000	6,000	5,808,000	3,000	64	7.4	1.4	26.8	.2	.2					215	135	Butyric	+	0	.204	.372	.167	.211		H
		85	5,100,000	7,200	5,124,000	5,300	67.2	8.4	.2	20.8	.2	3.2								0	0	.299	.430	.131	.182		C
	5	82	5,376,000	7,000	4,480,000	4,000	65.5	1.7	2.2	24.1	.5						50	100				.153	.401	.248		Specimen lost before completion	R
		78	5,176,000	7,000	5,172,000	6,700	73.4	8.2		17.6	.2	.6	Slight								.021	.182	.322	.119	.153		C
	6	92	5,820,000	5,300	6,340,000	4,800	59	4.4	1.2	33.4	.4	1.6	Consid		Many		240	140			.094	.175	.438	.169	.262		G
		88	5,388,000	4,500	5,428,000	3,500	54.4	10.8	.2	32.6	.4	1.6	Slight								.094	.197	.416	.125	.255		C
	7	92	5,860,000	5,700	6,700,000	6,400	55.2	5.2	2.4	35.4		1.8	Slight		Many		300	170			.094	.11	.430	.220	.216		G
		95	5,708,000	6,100	5,644,000	5,200	59.2	10.	.2	29.8	.2	.6	Slight								.087	.167	.365	.109	.240		C
	8	96	6,192,000	4,600	5,044,000	5,300	55.8	2.6	2.4	35	.2	4.	Slight		Mod	New set of pipettes used	285	160			.131	.175	.445	.139	.270		G
		92	5,128,000	4,000	5,008,000	3,800	60.2	5.	.4	26.4	.4	1.6	Slight								.131	.160	.420	.129	.277		C
	9	95	6,092,000	7,600	6,116,000	8,000	58	3.4	1.	33.8		3.8	Slight		Mod												G
		92	5,384,000	4,200	5,204,000	4,100	62.6	4.6	.6	29		3.2															C
	10	95	5,524,000	5,200	5,708,000	6,900	65	3.2	3.2	28.	.2	1.4	Slight		Mod		250	200			.116	.189	.319	.074	.262		G
		85	5,500,000	4,500	5,594,000	5,500	65.4	6.8	.6	24.6		2.6	Slight	Slight							.117	.53	.386	.116	.262		C
I R	1	78	5,904,000	4,100	7,264,000	5,000	49.2	3.2	.4	46.4	.4	.4	Consid	Slight	Many		300	144		+	0	.211	.328	.117	.138		G
		100	5,584,000	7,100	5,520,000	7,700	57.2	2.8	3.6	36.2		.2									0	0.17	.343	.326	.126		C
	2	74	6,200,000	4,600	6,780,000	2,800	49.2	4.8	.2	49.4		.6	Marked	Slight	Few		150	80		0	0	.306	.321	.015	.102	Expressed 1¼ hr after last breakfast	G
		92	5,744,000	28,100	5,640,000	27,300	50.4	4.8	1.	40.6		3. .2	Slight			Leucocytosis due to contamination of yeast cells				0	0	.286	.335	.049	.094		C
	3	88	5,900,000	5,200	6,480,000	5,900	51.8	1.8	1.2	44.4	.2	.6	Consid	Slight	Many		422	296		0	0	.204	.321	.117	.138	1½ hr after commencing breakfast	G
		92	5,340,000	4,100	5,400,000	4,300	62.6	6.2	1	27.8	.8	1.6	Slight		+	New pipette #2				0	0	.022	.277	.255	.058		C
	4	95	7,936,000	6,000	7,440,000	4,000	63.2	4.6	6.8	24.2	.6	.6				New pipettes used	260	165			.014	.146	.262	.101	.167		H
		92	5,640,000	5,200	5,700,000	5,900	62.	7.6	.6	26.4	.6	2.6	Slight								0	.189	.540	.351	.175		C
	5	92	7,048,000	3,500	7,796,000	3,000	60.8	2.6	1.6	33.6	.2	1.2					200	125	Butyric	+	0	.153	.270	.116	.153		H
		79	5,716,000	6,200	5,884,000	6,700	60.4	9.2	.6	28.4	.2	1.2	Slight							0	0	.226	.350	.124	.124		C
	6	90	6,772,000	5,800	6,372,000	5,700	44.2		1.	52.6	.4	1.8	Slight		Mod	New pipette #3 broken	260	140			.021	.197	.372	.154	.138		G
		89	5,928,000	5,600	5,896,000	5,400	50.4	3.4	.2	44.2	.4	1.4	Slight								.015	.197	.313	.101	.138		C
	7	92	6,704,000	4,400	5,688,000	4,300	54	3.6	3.8	37.2	.4	1	Slight		Few		398	266			.021	.167	.343	.155	.138		G
		87	5,832,000	5,100	5,892,000	4,000	52	8.	.6	36.8		2.4	Slight								.015	.182	.292	.095	.131		C
	8	90	7,524,000	7,800	6,968,000	9,000	58.8	2.2	.6	36.8	.2	1.4	Slight		Mod	New set of pipettes used	400	270			.051	.167	.292	.074	.138		G
		90	5,864,000	6,800	5,784,000	6,300	59.8	3.6	.2	34.2	.2	.2	Slight								.058	.146	.292	.088	.138		C
	9	92	5,996,000	7,600	5,784,000	6,000	44.8	3.4	.4	49.6	.2	1.6	Consid	Slight	Many												G
		90	6,304,000	6,000	6,024,000	4,000	48.4	1.8	.6	45.8	.2	3.	Slight														C
	10	95	6,200,000	5,500	6,664,000	5,600	56.4	2.4	2.4	36.8	.2	1.8	Slight	Slight	Few		175	100			.043	.153	.321	.125	.138		G
		95	6,200,000	6,500	5,920,000	5,500	56	2.6	.4	39.6	.2	1.2	Slight	Slight							.058	.204	.430	.167	.138		C
II H	1	73	5,468,000	5,800	7,38[illegible],000	11,400	71.6	4	1.2	22.6		.6	Mod		Mod		160	65		+	.0	.255	.408	.153	.175		G
		85	5,324,000	12,400	5,452,000	12,000	75.2	5.4	1.	16.8											.0	.313	.674	.361	.204	Exam made 2 hrs after collection	C
	2	79	5,904,000	5,300	5,884,000	3,500	61.8	1.4	.8	35			Slight		Mod		127	60			.051	.313	.416	.052	.219		G
		84	5,180,000	8,100	5,132,000	7,200	67	6.6	1.	23.8		1.6	Slight								.029	.197	.394	.168	.219	Exam made 2 hrs after collection	C
	3	73	5,432,000	5,500			75.2	3.6	.2	19.8	.2	1.			Mod		280	172			.073	.153	.306	.080	.204		G
		78	5,208,000	9,100			75	7.6	.4	15.6		1. .4	Marked	Slight Slight		New pipettes used					.051	.226	.372	.094	.204	Exam made 2 hrs after collection	C
	4	84	4,300,000	3,500	7,232,000	4,000	63.6	4.6	6	25	.2						310	220			.013	.153	.329	.103	.329		H
		92	5,136,000	5,400	5,048,000	5,300	68.8	7.6	.4	23.2			Slight								.080	.219	.423	.124	.219		C
	5	92	6,256,000	7,100	7,240,000	8,000	71.6	3.6	1.4	23.4			Consid				260	195			.116	.150	.343	.065	.233		H
		77	5,084,000	8,500	5,024,000	7,700	71	8.	.6	19.2		1.	Slight		Few						.065	.204	.401	.132	.219		C
	6	78	5,644,000	5,300	5,500,000	6,440	66	3.4	.2	34	.2	.6			Few		220	105			.087	.189	.372	.096	.226		G
		74	5,300,000	5,500	5,284,000	5,300	75.2	5.2		18.6	.4	.6	Slight								.065	.182	.350	.103	.233		C
	7	82	5,696,000	3,000	5,384,000	4,400	65	5	1	27.8		1.2			Mod		284	140			.036	.137	.328	.095	.167		G
		78	4,852,000	3,000	5,268,000	4,600	66.	6.4	.2	26.2	.2	1.	Slight								.036	.204	.299	.057	.167		C
	8	90	6,540,000	5,500	6,116,000	6,700	70	4.8	.2	24.4		.6	Slight		Many	New set of pipettes used	222	140			.102	.195	.401	.104	.240		G
		90	5,200,000	6,500	5,136,000	5,200	67.4	3	.2	29.8		.4	Marked		+						.087	.175	.394	.132	.255		C
	9	90	6,288,000	8,700	6,632,000	7,400	70.6	5	.1	2.2		1.4	Slight	Slight	Few												G
		85	5,154,000	4,800	5,072,000	5,200	70	1.2	.4	26.8			Slight														C
	10	85	5,348,000	7,500	5,772,000	7,700	66	2.4	.8	30.4	.2	.6	Slight		Mod		250	200			.146	.167	.379	.066	.219		G
		95	5,400,000	5,500	5,252,000	6,600	65.4	3.		29.8	.4	1.4	Slight	Slight							.146	.190	.401	.065	.233		C
	11	90	5,000,000	5,200	6,258,000	7,400	67.6	2.	.8	28.2	.2	1.2	Slight		Few		300	175			.109	.175	.328	.044	.189		G
		85	5,482,000	6,000	5,612,000	6,200	64	4.8	1.4	29.2		.6	Slight	Slight							.102	.240	.401	.058	.189		C

п.

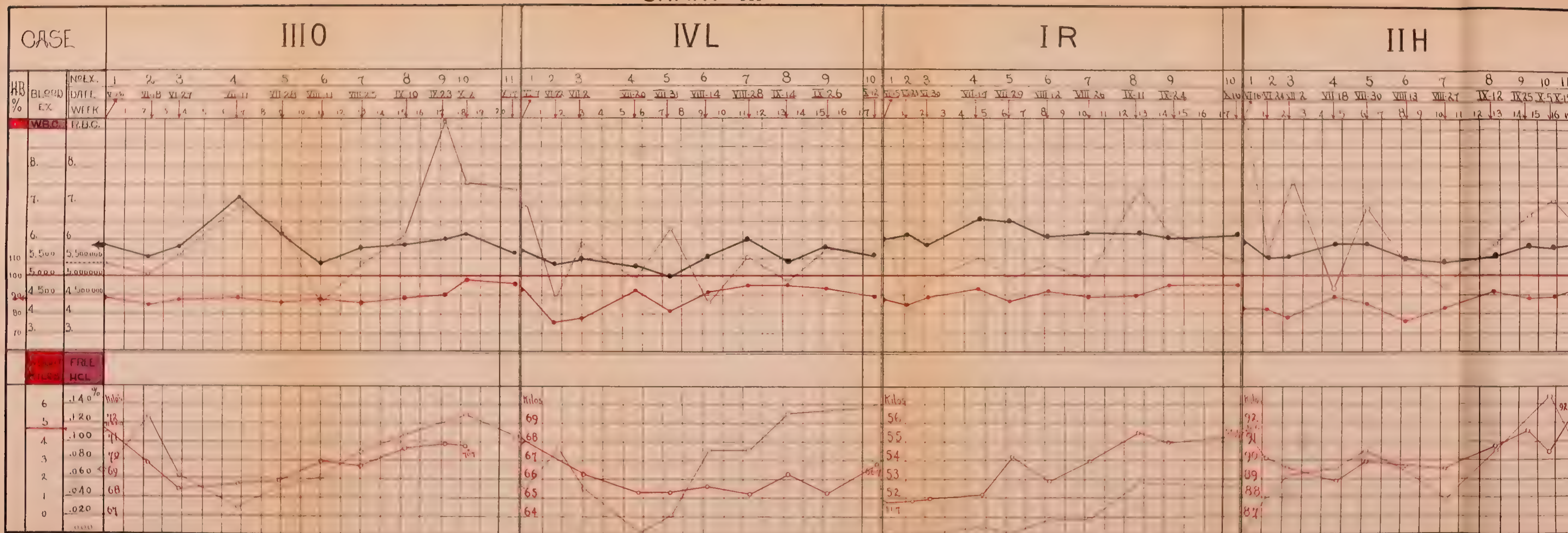
CHART II

CASE NUMBER	EX. Nº	DATE 1908	Wt. in KILOS	BLOOD: HB VON-FLEISCHL	Nº CELLS per CU.M.M. RED	WHITE	DIFFERENTIAL (2,000 Cells Counted) %: POLY	TRANS	L.MON	LYMPHS	BASO	EOS	STIM	PALLOR	ANISO-CYTO'S	POLY-CHROM	PLATES	GASTRIC: Amount C.C.S	Filtrate C.C.S	Odor	Lactic Acid (Kelling)	FREE HCL "MINTZ"	FIXED HCL "WINTER"	TOTAL HCL "WINTER"	COMB. HCL "WINTER"	TOTAL ACIDITY PHENOPTHN
III O	1	V/26	71.6	89.1	5,828,000	5,400	59.	5.	6.	28.	.4	1.8	.3	+				212	62			.069	—	—	.091	.189
	2	VI/18	69.8	85.	5,568,000	5,100	59.	4.	2	33.	.15	1.5		+				180	140			.127	.178	.419	.113	.215
	3	VI/27	68.4	85.5	5,794,000	5,600	64.	6.	2.	27.	.25	1.75	.05	+			+	300	206			.061	.218	.072	.092	.197
	4	VII/11	68.7	87.5	7,078,000	6,900	57.	6.	4.	32.	.4	1.						350	180			.032	.127	.269	.109	.147
	5	VII/28	68.9	86.	6,201,000	6,300	64.	4.	3.	28.	.6	.25						360	300			.050	.128	.299	.069	.151
	6	VIII/11	69.9	87.7	5,368,000	4,300	71.	7.	2.	19.	.5	.95						390	225			.065	.226	.386	.095	.226
	7	VIII/25	69.7	85.7	5,668,000	5,300	61.	6.	1.	31.	.45	.65		+			+	352	200			.090	.164	.299	.044	.207
	8	IX/10	70.7	88.5	5,762,000	6,100	67.	4.	1.	26.	1.35	.95		+			++	320	200			.109	.105	.324	.110	.197
	9	IX/23	70.8	90.	6,002,000	9,400	65.	2.	1.	31.	.25	.8		+	+											
	10	X/2	70.7	98.5	6,206,000	7,500	65.	3.	1.	30.	.2	1.35		+	+		+	250	140			.127	.161	.361	.072	.233
	11	X/17		96.7	5,663,000	7,300	65.	3.	1.	31.	0.	1.	.05	+			+	350	200			.109	.175	.390	.106	.218
IV L	1	VI/11	68.	91.8	5,732,000	6,900	54	4.	2.	38.	.35	1.05		+				130	90			.051	.182	.408	.160	.211
	2	VI/22	67.5	84.8	5,476,000	4,400	58	3.	1.	37.	.75	.7		+	+			270	120			.087	.266	.470	.117	.281
	3	VII/2	66.2	86.8	5,517,000	5,800	61	6.	1.	30.	.25	.95		+	+			340	211			.047	.258	.404	.099	.189
	4	VII/20	65.3	91.2	5,284,000	4,900	65	7.	1.	24.	.95	2.05						215	135		+	.000	.251	.401	.149	.229
	5	VII/31	65.3	80.5	5,075,000	6,300	70	5.	1.	21.	.53	.43						150	100			.021	.167	.361	.183	.153
	6	VIII/14	65.5	90.5	5,644,000	4,300	58	6.	1.	34.	.2	1.85		+			+	240	140			.094	.186	.427	.147	.258
	7	VIII/28	65.3	94.8	6,088,000	5,500	58	7.	1.	31.	.05	1.45		+			+	300	170			.090	.141	.397	.164	.244
	8	IX/14	66.2	94.5	5,418,000	4,800	57	5.	2	32.	.4	2.65	.05	+			+	285	160			.131	.167	.432	.134	.273
	9	IX/26	65.3	93.3	5,838,000	5,700	63	5.	1.	29.	.35	2.6		+			+									
	10	X/12	66.7	88.8	5,594,000	5,600	66	5.	1.	26.	.25	1.75		+	+		+	250	200			.116	.171	.382	.095	.262
I R	1	VI/15	51.7	88.3	6,042,000	5,900	52.	4.	2.	42.	.2	.4		+	+		+	300	144		+	.0	.114	.335	.221	.132
	2	VI/23	51.7	84.	6,237,000	4,100	49.	5.	1.	43.	.25	2.	.05	+	+			150	80			.0	.296	.328	.032	.098
	3	VI/30	51.9	88.	5,845,000	4,800	57.	4.	1.	36.	.5	1.3		+	+		+	422	296			.0	.113	.299	.186	.098
	4	VII/17	52.2	92.5	6,669,000	5,500	63.	6.	5.	24.	.4	1.75						260	165			.007	.167	.401	.226	.171
	5	VII/29	54.2	86.3	6,596,000	4,900	60.	7.	3.	29.	.25	1.1						200	125	Butyric	+	.0	.189	.310	.120	.138
	6	VIII/12	52.8	90.3	6,182,000	5,300	48.	2.	2.	47.	.25	1.65		+			+	260	140			.018	.197	.342	.127	.138
	7	VIII/26	53.9	88.5	6,360,000	4,900	51.	5.	2.	40.	.3	1.25	.05	+				398	266			.018	.174	.317	.125	.134
	8	IX/11	55.3	89.2	6,391,000	7,400	59.	2.	1.	36.	.15	1.7		+			+	400	270			.054	.156	.292	.081	.138
	9	IX/24	54.9	94.5	6,068,000	6,100	47.	2.	1.	47.	.2	1.95		+	+		+									
	10	X/16	55.1	94.5	6,228,000	5,400	58.	2.	1.	35.	.1	1.75		+	+			175	100			.050	.178	.375	.146	.138
II H	1	VI/16	91.6	81.9	5,852,000	9,300	72.	4.	1.	21.	.15	1.05		+			+	160	65		+	.0	.284	.541	.257	.189
	2	VI/24	90.	81.5	5,464,000	5,600	61.	4.	1.	34.	.1	1.05		+			+	127	60			.04	.255	.405	.110	.219
	3	VII/2	89.6	78.3	5,510,000	7,600	73.	5.	.2	21.	.15	1.05	.1	+	+	+	+	280	172			.062	.189	.339	.087	.204
	4	VII/18	88.9	89.	5,818,000	4,700	71.	4.	1.	24.	.05	.1		+				310	220			.076	.186	.376	.113	.274
	5	VII/30	89.9	84.8	5,817,000	6,800	71.	6.	1.	21.		.3		+				260	195			.090	.182	.372	.098	.226
	6	VIII/13	89.7	76.	5,458,000	5,400	66.	4.	.3	29.	.15	.45		+				220	105			.076	.185	.361	.099	.229
	7	VIII/27	89.6	81.8	5,362,000	4,700	65.	4.	1.	29.	.1	.7		+			+	284	140			.036	.200	.313	.076	.167
	8	IX/12	90.7	90.5	5,607,000	5,800	70.	4.	.1	26.	.15	.45		+			+	222	140			.094	.185	.397	.118	.247
	9	IX/25	91.5	87.5	5,820,000	6,700	69.	3.	.4	26.		1.1		+	+		+									
	10	X/5	90.4	88.5	5,740,000	7,000	65.	3.	1.	30.	.3	1.55		+	+		+	250	200			.146	.178	.390	.065	.226
	11	X/15	92.3	93.5	5,855,000	6,500	65.	3.	1.	30.	.1	1.2		+	+			300	175			.105	.207	.364	.051	.189



10
1
2
X-16
VI-16
VI-24
7
1
2
Kilo's
92
91.6
55.1
91
90
89
88
87

CHART III


CASE
III O
IV L
I R
II H
HB %
BLOOD EX.
No. EX.
DATE
WEEK
W.B.C.
R.B.C.
FREE HCL
Kilos

V

b.	Total Acidity
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	.203
	.172
	.205
	.142
	.213
	.188
	.214
	.215
	.204

S

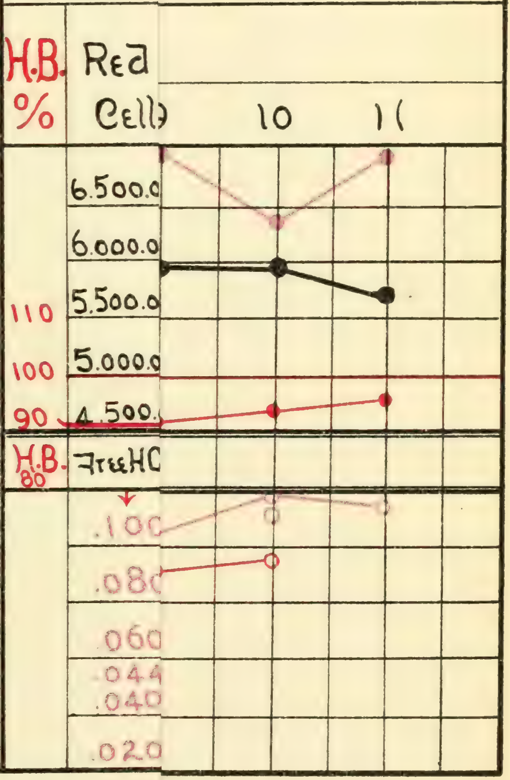
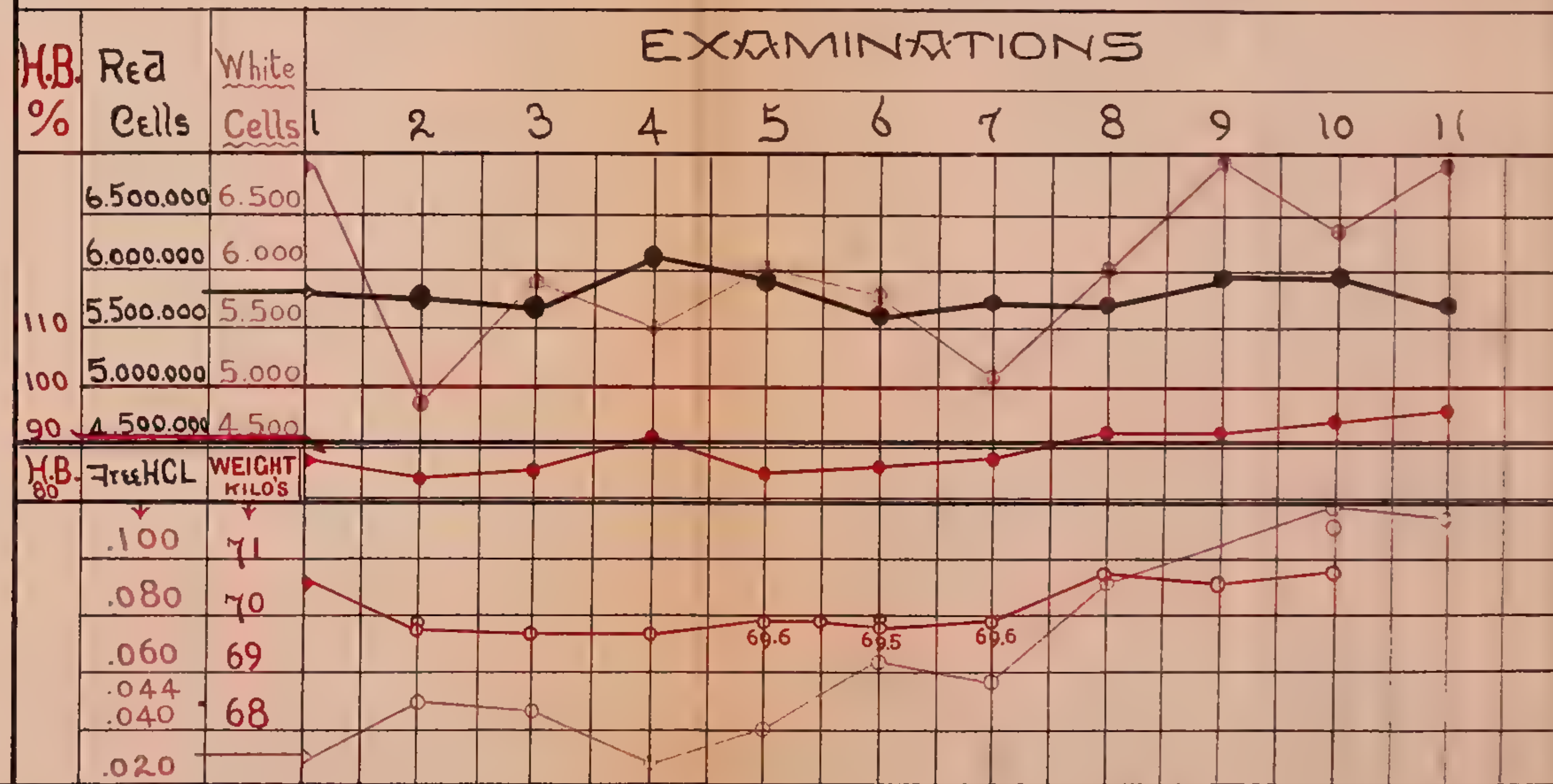


CHART IV

No. of Exam	Weight in Kilos	BLOOD: Cells per cu.m.m. HB	Reds	Leuco's	Differential: P.	T.	LM.	L.	B.	E.
1	70.7	87.7	5.788.000	6.800	59.4	4.	2.8	32.2	.3	1.1
2	69.8	83.8	5,686,000	4.800	56.6	4.	2.8	36.5	.2	1.3
3	69.	84.6	5.666.000	5.900	63.6	5.	.9	28.4	.3	1.3
4	68.8	90.	6.212.000?	5,500	64.1	5.9	2.6	25.7	.3	1.2
5	69.6	84.3	5.922.000	6.000	66.4	5.5	2.	24.6	.3	.3
6	69.5	86.1	5.663.000	4.800	60.8	4.8	1.	32.2	.3	1.5
7	69.6	87.6	5.869.000	5.100	58.6	5.7	1.1	32.8	.2	1.
8	70.7	90.6	5.794.000	6.000	63.	3.7	.9	30.	.5	1.4
9	70.6	90.4	5.932.000	6.900	61.1	3.2	1.9	33.1	.2	1.6
10	70.7	92.5	5,942,000	6.3	63.4	3.1	1.	30.2	.2	1.6
11		95.1	5.759.000	6.900	64.7	3.	.7	30.3	.05	1.1

No. of Exam	GASTRIC: Am't c.c's	Filtrate c.c's	Free HCL	Fixed HCL	Total HCL	Comb. HCL	Total Acidity
1	200	90	.030	.193	.461	.182	.180
2	182	100	.055	.249	.406	.093	.203
3	336	221	.043	.195	.279	.116	.172
4	284	175	.029	.183	.362	.149	.205
5	243	180	.040	.167	.336	.118	.142
6	278	155	.063	.199	.379	.117	.213
7	334	194	.059	.170	.332	.102	.188
8	307	193	.097	.153	.361	.111	.214
9	No Examination made						
10	231	160	.110	.172	.377	.095	.215
11	225	188	.107	.191	.377	.079	.204

BLOOD, WEIGHT AND FREE HCL CURVES



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BIBLIOGRAPHY OF THE MORE IMPORTANT WORK ON BENZOATES.

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BIBLIOGRAPHY.

KELLER. Über Verwandlung der Benzoësäure in Hippursäure. Liebig's Annalen der Chemie, 1842, XLIII, 108.

Author took 2 grams of benzoic acid in evening without effect other than night sweat attributed to the acid. This dose was taken three times next day without other effects. Much hippuric acid was excreted. Urea and uric acid were not decreased.

MARCHAND. Über die Oxydationsproducte des Leims durch Chromsäure. Journal für practische Chemie, 1845, XXXV, 309.

Of 5 grams of benzoic acid taken at once most was recovered as hippuric acid. Diarrhea. During 10 days 30 grams of benzoic acid were taken. No mention of ill effects.

WÖHLER and FRERICHS. Über die Veränderungen, etc. Liebig's Annalen der Chemie, 1848, LXV, 335.

In experiments, mostly on dogs, benzaldehyde was transformed in the organism to benzoic acid and excreted as hippuric acid. Ethyl benzoate is transformed to hippuric acid.

KÜHNE and HALLWACHS. Über die Entstehung der Hippursäure, etc. Virchow's Archiv für pathologische Anatomie, 1857, XII, 386.

Injection experiments on dogs. Formation of hippuric acid from introduced benzoic acid does not occur in intestines, nor in circulating blood, but in hepatic vessels in presence of constituents of bile (glycocholic acid).

LÜCKE. Über die Anwesenheit der Hippursäure, etc. Virchow's Archiv für pathologische Anatomie, 1860, XIX, 196.

Method of detecting hippuric acid. Many specimens of normal urine from mixed diet contain no hippuric acid. It is found after taking food mostly vegetable; also after eating fruit, especially cranberries. Fresh fruit apparently contains free benzoic acid.

LAUTEMANN. Über die Reduction der Chinasäure, etc. Liebig's Annalen der Chemie, 1863, CXXV, 9.

Author took 8 grams of the calcium salt of quinic acid, which is easily transformed into benzoic acid in the laboratory. It was excreted as hippuric acid. Same results with two other subjects.

MATTSCHEWSKY. Zur Entstehung der Hippursäure. Virchow's Archiv für pathologische Anatomie, 1863, XXVIII, 538.

In dogs, after diet of bread, meat, or milk, urine does not contain hippuric acid. Quinic and cinamic acids afford much hippuric acid. After giving benzoic acid per os, in one dog, with alkaline urine, free benzoic acid was excreted; in another, with acid urine, hippuric and benzoic acids. In man quinic acid increased the output of hippuric acid.

MEISSNER and SHEPARD. Untersuchungen über das Entstehen der Hippursäure im thierischen Organismus. Hannover, 1866.

There is no hippuric acid or benzoic acid in the blood of animals which excrete hippuric acid abundantly in the urine. According to the authors' experiments on man, ingestion of 7.6 grams of benzoic acid as sodium salt in solution after breakfast was followed suddenly, 30 minutes later, by nausea and vomiting. When 5.7 grams were taken after breakfast there was vehement vomiting after about 35 minutes. When vigorous exercise was taken after the same dose (5.7 grams) there was some nausea, but no vomiting. The nausea can be made to disappear by violent exercise, with deep inspirations, etc. After taking 3.8 grams, when the subject was kept quiet in a warm room there was no nausea or vomiting. A stronger and heavier person repeatedly took 7.6 grams without these symptoms. There was no hippuric acid in the sweat or saliva. 7.6 grams taken in two divided doses, without nausea or vomiting, failed to produce increase of urea, but rather a tendency to decrease. In man, daily outputs of hippuric acid in the urine have been observed as follows:

	Grams.
By Weismann, on mixed diet	2.47
By Boedeker, for normal healthy individuals	1.0 to 2.0
By Hallwachs, on diet not exclusively composed of meat	1.0
By Bence Jones	0.25 to 0.45
By Weismann, on meat diet	0.76
By Kühne, on diet mostly of meat	Traces.
By the authors, on diet not exclusively composed of meat	0.08 to 0.1

The amount seems to be very constant under the same conditions.

The authors conclude from their experiments on animals that the kidney is the only organ where benzoic acid is normally transformed into hippuric acid. When 2 grams of benzoic acid per day were fed to a rabbit during 3 days there was no decrease in urea output. In a dog of 12 to 13 kilograms, 8 grams of benzoic acid given in solution per os caused vomiting. Later 8 grams were given twice a day as dry powder packed in meat. There was apparently no decrease in urea. After several days a toxic effect was noted—difficulty in urinating, spasms, attack of rage, attempts to bite, foam at mouth. Benzoic acid was continued 2 days more and the attacks recurred. Appetite remained good. Convulsions occurred the day after the benzoic acid administration was stopped, and then they ceased. Similar attacks were observed in a small dog which received 10 grams benzoic acid for 3 days. The authors conclude that the continued administration of large amounts of benzoic acid is not without danger, although Keller took 2 grams per day for some time without feeling any ill effects. Hippuric acid is formed from benzoic acid in all animals. Authors conclude that in herbivorous animals the excretion of hippuric acid is dependent on the cuticular substance of plants ingested. The small amount in normal human urine probably derives its origin from metabolism products.

HOFMEISTER. Beobachtungen über Hippursäurebildung im Pflanzenfresserharn. Landwirtschaftliche Versuchsstationen, 1871, XIV, 458.

A study of the conditions of hippuric acid formation in herbivorous animals.

BUCHHOLTZ. Antiseptica und Bacterien. Archiv für experimentelle Pathologie und Pharmacologie, 1875, IV, 1.

Studies on the bactericidal action of benzoic acid and benzoates. Bacteria are destroyed by benzoic acid in a concentration of 1 to 250. In his media sodium benzoate inhibited development of bacteria in a concentration of 1 to 2,000; benzoic acid in a concentration of 1 to 1,000.

WEISKE. Untersuchungen über die Hippursäurebildung im Körper des Herbivoren bei Verabreichung verschiedenartiger Futtermittel. (Unter Mitwirkung von Kellner und Wienand.) Zeitschrift für Biologie, 1876, XII, 241.

The assumption of Meissner and Shepard and Harten that the cuticular substance of plants is the mother substance of hippuric or benzoic acid is little probable. A small amount of hippuric acid has a normal metabolism independent of food. In rams kept on hay, introduction of 15 grams of benzoic acid per day did not give rise to the appearance of free benzoic acid in the urine. The increase in the excretion of nitrogen after benzoic acid does not occur at the expense of urea. The urine of one animal fed with beans and potatoes was found free from hippuric acid. After addition of benzoic acid to the food (for 3 days 5 grams and for 1 day 10 grams) only free benzoic acid appeared in the urine and no hippuric acid. With same food plus glycocoll there was no hippuric acid. With glycocoll and benzoic acid and after feeding 5 grams of hippuric acid, only free benzoic acid and no hippuric acid was found in the urine. Author concludes that hippuric acid had been decomposed in the body and that the kidneys do not always form hippuric acid from benzoic acid and glycocoll.

E. OKOLOW. Über die Einwirkung der Salicyl- und der Benzoësäure auf Fäulniss und Gährung. Centralblatt für Chirurgie, 1876, p. 777. [Abstract by W. Grube. Original, Russian.]

Both acids inhibit putrefaction and fermentation. Benzoic acid more. After internal application the urine decomposes more slowly. Small doses have no influence on stomach digestion. Large doses inhibit it completely. Small doses have no apparent influence, while larger doses decrease urea. After larger doses there is increase in amount of urine. Larger doses diminish the body weight. In 2 animals with fever benzoic acid reduced the temperature more than salicylic acid.

E. SALKOWSKI. Zur Wirkung des benzoësäuren Natrons. Virchow's Archiv für pathologische Anatomie, 1877, LXXVIII, 53.

Author concludes that sodium benzoate causes considerable increase in the decomposition of body proteins and that it would be well not to regard the administration of large doses of benzoates during long periods as harmless medication. He found increase of nitrogen and sulphur excretion.

A. HOFFMANN. Über die Hippursäurebildung in der Niere. Archiv für experimentelle Pathologie und Pharmacologie, 1877, VII, 239.

Author found hippuric acid in his urine within one-half hour after taking benzoic acid and glycocoll; neither hippuric acid nor benzoic acid in the sweat. He reports transfusion experiments with excised dog kidneys, using benzoic acid, etc. Various factors inhibit hippuric acid synthesis.

F. WALTER. Die Wirkung der Säuren auf den tierischen Organismus. Archiv für experimentelle Pathologie und Pharmacologie, 1877, VII, 148.

In a rabbit 9 grams of hippuric acid per kilogram produced no pronounced acid intoxication.

Bunge and Schmiedeberg. Über die Bildung der Hippursäure. Archiv für experimentelle Pathologie und Pharmacologie, 1877, VI, 233.

Classic description of estimation of hippuric acid and place of its formation in the animal body. In dogs hippuric acid is formed in the kidneys, which sustained their power to transform benzoic acid into hippuric acid for hours after excision.

Salkowski. Vorgang der Harnstoffbildung im Tierkörper. Zeitschrift für physiologische Chemie, 1877–1878, I, 1.

In a rabbit fed on potatoes and benzoic acid there was considerable increase in nitrogen excretion; the proportion of nitrogen to sulphur remained the same as before. The benzoic acid appeared mostly as hippuric acid. After introduction of hippuric acid the urine of rabbits reduced cupric oxide. The nature of the reducing substance is not known. Dogs take benzoic acid with their diet without injury at least for 30 days. When on 2 consecutive days between 5 and 7.5 grams of sodium benzoate were given, a definite increase in nitrogen and sulphur excretion occurred, i. e., increased protein matabolism

Lauder Brunton. Text Book on Pharmacology, Therapeutics and Materia Medica. London, 1878, 3d edition, 78.

Data on the inhibitory action of benzoic acid and sodium benzoate upon various enzymes.

G. Brown. Zur Therapie der Diptheritis. Archiv für experimentelle Pathologie und Pharmacologie, 178, VIII, 140.

A 5 per cent solution of sodium benzoate seems to destroy diphtheria bacilli within one hour.

Klebs. Über einige therapeutische Gesichtspuncte welche durch die parasitäre Theorie der Infectionskrankheiten geboten erscheinen. Prager medizinische Wochenschrift, 1878, III, 5, 16, 41, 54.

Author has often tried 5 grams of sodium benzoate on himself and others without any disturbance of digestion. In dogs the maximal permissible dose of sodium benzoate for subcutaneous injection is 1 per mille of body weight; in rabbits 2 per mille of body weight is a fatal dose.

Klebs. Über einige therapeutische Gesichtspuncte welche durch die parasitäre Form der Infectionskrankheiten geboten erscheinen. Prager medizinische Wochenschrift, 1878, III, No. 1, 2, 5, 6.

Sodium benzoate seems to be more advantageous than salicylic acid in bacterial infections, since it can be given in larger doses without danger. Subcutaneously the maximal permissible dose is 1 per mille of body weight; 2 per mille is a fatal dose. The largest single dose to be used is 5 grams.

Klebs. Natrium benzoicum. Correspondenzblatt für Schweizer Aerzte, 1878, VIII, 313.

In an oral communication to the editor the author states that there are absolutely no disagreeable effects when sodium benzoate is used for even longer periods of time, in doses up to 25 grams per day. The usual dose is 10 to 15 grams per day; the maximal dose up to 12 per mille of body weight.

Salkowski. Über den Einfluss der Verschliessung des Darmkanals, etc. Virchow's Archiv für pathologische Anatomie, 1878, LXXIII, 421.

Hippuric acid is found in the urine of the starving dog and is not increased after ligating the intestines. In rabbits hippuric acid does not appear in the urine when it is free from phenol.

E. Salkowski. Über das Vorkommen von Allantoin und Hippursäure im Hundeharn. Berichte der deutschen chemischen Gesellschaft, 1878, XI, 500.

A dog on exclusive meat diet and in hunger excretes small and varying amounts of hippuric acid. Ligating the intestines has no influence on the hippuric acid excretion.

Winter. Zur therapeutischen Verwendung des benzoësäuren Natrons. (Abstract.) Schmidt's Jahrbücher für die gesammte Medizin, 1879, CLXXXIV, 121.

Report of views of others.

Naumann. Über die therapeutische Verwendung des benzoësauren Natrons. (Nach Schüller, Klebs, Letzerich, Hoffmann.) Schmidt's Jahrbücher für die gesammte Medizin, 1879, CLXXXII, 125.

Discussion of the therapeutic dosage of sodium benzoate, especially in febrile processes. Dogs can endure injections of 1.7 grams per kilogram without any danger. A dog of 6.5 kilograms which received 11 grams of sodium benzoate injected within 90 minutes showed short vagus stimulation and a relatively long increase of arterial pressure. On this basis a man of 50 kilograms could withstand a dose of 85 grams of sodium benzoate. Hoffmann gives adults 10 grams per day and gave an 11-year-old girl 6 grams per day for 10 days without ill effect.

SENATOR. Über die Wirkung der Benzoësäure bei der rheumatischen Polyarthritis. Zeitschrift für klinische Medizin, 1879, I, 243.

The author administered sodium benzoate in doses of 4 to 6 grams per day without the slightest ill effect, then increased it to 11 to 12 grams. In acute rheumatism as much as 70 grams of sodium benzoate were given during the course of the disease, usually within 11 days, without any symptoms of irritation. Soon after administration the urine acquired strong reducing properties.

FRITSCHE. [In a discussion of a paper on inhalations of sodium benzoate in tuberculosis of the lungs.] Berliner klinische Wochenschrift, 1879, XVI, 762.

Untoward effects reported in the treatment of a tubercular patient with inhalations of sodium benzoate.

M. SCHÜLLER. Über therapeutische Versuche bei mit tuberculösen, scrophulösen, septischen Massen inficierten Tieren. Archiv für experimentelle Pathologie und Pharmacologie, 1879, XI, 84.

The author states that it is possible for an adult to take 20 to 30 grams of sodium benzoate per day internally without injurious effect.

F. KROCZAK. Vorläufige Mitteilung über Natronbenzoicum Inhalationen am Krankenbette. Wiener medizinische Presse, 1879, XX, 1178.

SALOMON. Über den Ort der Hippursäurebildung beim Pfianzenfresser. Zeitschrift für physiologische Chemie, 1879, III, 365.

In rabbits benzoic acid or benzoic acid plus glycocoll given per os leads to the formation of hippuric acid. In herbivora the kidneys are not the only organs where this synthesis takes place, but in dogs the idea of Bunge and Schmiedeberg that the kidney is the only place of the synthesis is still valid. (Salkowski.)

VON SCHRÖDER. Über die Bildung der Hippursäure im Organismus des Schafes. Zeitschrift für physiologische Chemie, 1879, III, 323.

Author took 0.5 gram of benzoic acid in KOH, with a diet of potatoes and butter. The strongly alkaline, turbid urine contained no trace of benzoic acid. In rams fed on potatoes and beans 5 to 6 grams of benzoic acid given per os as potassium salt reappeared in urine mostly as hippuric acid (77 to 90 per cent) with relatively small amounts of free benzoic acid (4 to 23 per cent). Only small amounts of the introduced benzoate were unaccounted for. (*vs.* Weiske.)

R. DEMME. Sechszehnter mediz. Bericht über die Thätigkeit des Jennerschen Kinderhospitals in Bern im Laufe des Jahres 1878. Schmidt's Jahrbücher für die gesammte Medizin, 1879, CLXXXIII, 218.

Diphtheria is treated with 5 to 20 grams of sodium benzoate per day, besides local treatment with it and subcutaneous injections of a 50 per cent solution in retro and submaxillary region and in the tonsils. There was no drop of temperature; the heart action was improved and urine secretion increased.

STADELMANN. Über die Umwandlung der Chinasäure in Hippursäure im Organismus der Säugetiere. Archiv für experimentelle Pathologie und Pharmacologie, 1879, X, 317.

The sodium salt of quinic acid produces an increase in hippuric acid in herbivorous animals (rabbits), but none in carnivorous animals (dogs). The output does not account for the amount of quinic acid introduced, and appears after a relatively long time.

ROKITANSKY. Zur Behandlung der Phthise mittelst Inhalationen von Natrium benzoicum. Wiener medizinische Presse, 1879, XX, 1330.

Inhalations of sodium benzoate are reported to be of great value in phthisis. A patient of 50 kilograms must use at least 50 grams in 5 per cent solution per day, the dose being determined by the body weight. Patient must inhale 1 gram per kilogram. It is assumed to reach the lung in sufficient concentration to act bactericidally.

W. KOCHS. Über eine Methode zur Bestimmung der Topographie des Chemismus im tierischen Körper. Pflüger's Archiv für die gesammte Physiologie, 1879, XX, 64.

Confirmation of the Bunge-Schmiedeberg experiments on hippuric acid-formation after transfusion of dog kidney with blood plus glycocoll plus benzoic acid. The synthesis also takes place in the presence of comminuted kidney of dog, ox, and calf. Experiments with liver (dog, calf) were negative.

JAARSVELD and STOKVIS. Über den Einfluss von Nierenaffectionen auf die Bildung von Hippursäure. Archiv für experimentelle Pathologie und Pharmacologie, 1879, X, 268.

The urine of a healthy individual never contained free benzoic acid after administration of 0.4, 0.5, 1, and 2 grams of benzoic acid within 5 days. In a patient with healthy kidneys and liver, after giving 1.5 grams benzoic acid, 60 per cent was recovered in the form of hippuric acid, 0.54 gram, and free benzoic acid, 0.34 gram. In chronic hemorrhagic pleurisy with stasis, 33 per cent of 1.2 grams of benzoic acid given was excreted as hippuric acid. There was no free benzoic acid present. In three cases of interstitial nephritis the introduced benzoic acid (maximum dose 1.5 grams) nearly always reappeared exclusively as hippuric acid. In two cases of amyloid degeneration of the kidney the introduced benzoic acid appeared, with exception of one day, only as free benzoic acid. In parenchymatous nephritis introduced benzoic acid was excreted either only as free benzoic acid or in marked preponderance as free benzoic acid; usually 50 to 60 per cent of the introduced benzoic acid reappeared. Authors conclude that benzoic acid not found in urine is not absorbed. After introduction of benzoic acid there is no increase of ethereal sulphates in the urine. Authors conclude that in man the capacity to excrete benzoic acid as hippuric acid is diminished or entirely gone in affections of the kidneys, the greatest inhibition being noted in parenchymatous nephritis. The rabbit can form hippuric acid in the small intestine and liver as well as in the kidney.

WEISKE. Über Hippursäurebildung im tierischen Organismus. Zeitschrift für Biologie, 1879, XV, 618.

Author repeats experiments of feeding benzoic acid to a ram on a diet of beans and potatoes. Like Von Schröder, he now finds only hippuric acid in the urine, and no benzoic acid.

WINTER. Zur therapeutischen Verwendung der Benzoësäure und des benzoësäuren Natrons. (Abstract.) Schmidt's Jahrbücher für die gesammte Medizin, 1880, CLXXXVI, 121.

Author reports failure to observe ill effects (diarrhea) after the therapeutic use of benzoates. They are strongly diuretic.

R. KOBERT. (Nach eigenen im Verein mit Dr. Schulte ausgeführten Untersuchungen.) Zur Kenntnis der Wirkung der Benzoësäure. Schmidt's Jahrbücher für die gesammte Medizin, 1880, CLXXXV, 12.

After intravenous introduction of sodium or magnesium benzoate in dogs, benzoic acid appears in the saliva. The reducing substance found in the urine after administration of benzoic acid occurs only definitely after giving extraordinarily high doses, and occasionally in persons who do not get benzoic acid. Salkowski thinks this is probably due to the benzoic acid content of the food. The presence of this substance is regarded as the first sign of intoxication. It occurs only in the urine and never in saliva. In animal experiments it was found after subcutaneous and per os administration of benzoic acid and its salts, but never after intravenous injection. In man the reducing substance did not occur in the urine after subcutaneous injection of 5 c. c. of a 30 per cent solution; it seems to be found only after administration of benzoic acid per os. In cold-blooded animals (frogs) the free acid and its salts produce the toxic effects in the same manner. These are: Clonic spasms of muscles; exceptionally tetanus; gradually vomiting, sometimes bloody, even after subcutaneous injection, respiration frequent, pulse not quickened nor retarded, except toward exitus. Reflex excitability was decreased to complete loss. Respiration stopped when reflex excitability was diminished to a very high degree, but by careful dosage restitution was still possible. The paralysis of the reflex excitability is the same after severing the brain, therefore paralysis of reflex excitability of the cord. In warm-blooded animals (rabbits, cats, dogs) toxic doses per os, subcutaneously or intravenously, produced trembling and convulsions at times, more often diminution of psychic functions; first atactic movements of the anterior extremities, paresis, then paralysis gradually progressing backward, together with a drop in temperature. In dogs there is usually vomiting, rarely diarrhea. Hemorrhages and erosions of the stomach mucosa occurred even after subcutaneous or intravenous injections. Death was due to paralysis of respiration. There seems to be a complete paralysis of brain and cord. Benzoic acid, as well as its salts, when given in doses exceeding 2 per cent (2 per mille?, see Wiener) of body weight causes in all animals intoxication followed by death. Post-mortem, the mucosa of the stomach may be found hyperemic, hemorrhagic, even necrotic; therefore large doses which can only be given per os in man should be cautiously administered to avoid erosions. The appearance of reducing substance in the urine is a valuable sign of intoxication. Therapeutically, the author gave 5 to 10 grams of sodium benzoate per day. Severe toxic symptoms were avoided; but frequently very intense nausea and vomiting, sometimes with a little blood, were observed. In one case there were severe toxic symptoms, due to bleeding in the stomach. Abnormalities of pulse and blood and respiration were never seen. Larger doses, like 10 grams at one time, are not permissible on account of the stomach symptoms. Reducing substance in the urine was rarely encountered.

WEYL and ANREP. Über die Ausscheidung der Hippursäure und Benzoësäure während des Fiebers. Zeitschrift für physiologische Chemie, 1880, IV, 169.

In patients hippuric acid and free benzoic acid were found. Rabbits fed with milk and oats always excrete hippuric acid and some benzoic acid. During fever the excretion of free benzoic acid is increased and that of combined benzoic acid is decreased. The excretion of free benzoic acid could not be altered by introduction of glycocoll, suggesting that a rabbit with fever has partly lost its capacity to synthetize hippuric acid. In dogs during fever there is less hippuric acid than before, but no increase of benzoic acid. When sodium benzoate is fed to dogs in fever a much larger part of the benzoic acid reappears as free benzoic acid than in normal conditions.

E. SALKOWSKI. Notizen. Zeitschrift für physiologische Chemie, 1880, IV, 135.

Author suggests that the reducing substance found in the urine after ingestion of benzoic acid may be a glucoside-like compound.

SCHMIEDEBERG. Über Oxydationen und Synthesen im Tierkörper. Archiv für experimentelle Pathologie und Pharmacologie, 1881, XIV, 288.

Benzoic acid may be formed from benzylalcohol and dog's blood, and in transfusion through excised kidneys. In the organism toluene is transformed to benzoic acid and hippuric acid.

SCHMIEDEBERG. Über Spaltungen und Synthesen im Tierkörper. Archiv für experimentelle Pathologie und Pharmacologie, 1881, XIV, 379.

Author concludes that hippuric acid formation probably occurs in most or all organs of the body. A histozym capable of decomposing it also exists.

C. VIRCHOW. Über die Einwirkung des benzoësäuren und salicylsäuren Natrons auf den Eiweissumsatz im Körper. Zeitschrift für physiologische Chemie, 1882, VI, 78.

Five to 7 grams of benzoic acid administered to dogs of 22 and 26 kilograms on successive days produced increase of nitrogen excretion; and when sodium benzoate was given to a dog in a normal state of nutrition, considerable increase of protein decomposition (25 to 40 per cent) was observed.

SALKOWSKI. Weitere Beiträge zur Kenntnis der Harnstoffbildung. Zeitschrift für physiologische Chemie, 1882–1883, VII, 93.

In man, dog, and rabbit amido-benzoic acid is partly transformed to uramido-benzoic acid, the rest excreted partly unchanged, partly as amido-hippuric acid. Like benzoic acid, amido-benzoic acid causes increase of protein metabolism, but to a smaller extent.

J. SCHIFFER. Weitere Beiträge zum Verhalten des Sarkosins im tierischen Organismus. Zeitschrift für physiologische Chemie, 1882–1883, VII, 479.

In animal experiments feeding of sarkosin and benzoic acid resulted only in normal hippuric acid formation, not an excretion of sarkosin hippuric acid.

E. SALKOWSKI and H. SALKOWSKI. Über das Verhalten der aus dem Eiweiss durch Fäulniss entstehenden aromatischen Säuren im Tierkörper. Zeitschrift für physiologische Chemie, 1882–1883, VII, 161.

An increased output of hippuric acid was found in the urine of a dog after feeding 2 grams of phenylpropionic acid.

E. BAUMANN. Zur Kenntnis der aromatischen Substanzen des Tierkörpers. Zeitschrift für physiologische Chemie, 1883, VII, 553.

Tyrosin fed to man and dogs in large amounts never caused an increase of hippuric acid output.

SCHOTTEN. Über die Quelle der Hippursäure im Harn. Zeitschrift für physiologische Chemie, 1883, VIII, 60.

Feeding experiments on dogs with phenolamidopropionic acid, leading to the excretion of hippuric acid.

KRONECKER. Über die Hippursäurebildung beim Menschen in Krankheiten. Archiv für experimentelle Pathologie und Pharmacologie, 1883, XVI, 344.

Author maintains that a normal individual does not excrete any free benzoic acid after its introduction. After feeding 0.5 gram of sodium benzoate to 6 nephritic patients, the observations of Jaarsveld and Stokvis were confirmed in affections of the kidneys. There is a decreased capacity to transform benzoic acid to hippuric acid. In 2 cases of typhoid fever, with high temperature, nearly all of the introduced benzoic acid was excreted as hippuric acid.

MINKOWSKI. Über Spaltungen im Tierkörper. Archiv für experimentelle Pathologie und Pharmacologie, 1883, XVII, 445.

In nephrectomized dogs the author found free benzoic acid in the blood, liver, and muscles after subcutaneous injection of hippuric acid under the necessary precautions. In rabbits the results were negative. This shows that different chemical processes go on in different chemical species. The decomposition of hippuric acid is accomplished through ferment action.

VAN DE VELDE and STOKVIS. Experimentelle Beiträge zur Frage der Hippursäurezerlegung im lebenden Organismus. Archiv für experimentelle Pathologie und Pharmacologie, 1883, XVII, 189.

Authors conclude that the existence of a ferment in the living organism leading to a decomposition of hippuric acid into benzoic acid and glycocoll has not yet been sufficiently proved. The contradictory results of others can be explained from the ease with which hippuric acid is decomposed outside of the body in animal fluids, especially at alkaline reaction, and if they contain much albumen.

E. SALKOWSKI. Über das Vorkommen der Phenacetursäure im Harn und die Entstehung der aromatischen Substanzen beim Herbivoren. Zeitschrift für physiologische Chemie, 1885, IX, 229.

In the horse hippuric acid may be formed from hydrocinnamic acid, a product of protein putrefaction in the intestinal tract.

E. SALKOWSKI. Zur Kenntnis der Eiweissfäulnis III. Über die Bildung der nicht hydroxylierten aromatischen Säuren. Zeitschrift für physiologische Chemie, 1885, IX, 491.

Homologues of benzoic acid (hydrocinnamic acid and phenylacetic acid) are a constant product of protein putrefaction.

NOËL PATON. On the relationship of urea formation to bile secretion. Journal of Anatomy and Physiology, 1886, XX, 114, 267.

Doses of 0.51 and 0.55 gram of sodium benzoate per kilogram in dogs have practically no influence on the amount of water excreted. The uric acid excretion is diminished, that of urea increased. The author regards sodium benzoate as an hepatic stimulant.

E. BAUMANN. Die aromatischen Verbindungen im Harne und die Darmfäulniss. Zeitschrift für physiologische Chemie, 1886, X, 123.

Author concludes that the excretion of hippuric acid in carnivorous animals (dog) is exclusively dependent on putrefactive processes in the intestines.

BAAS. Über das Verhalten des Tyrosins zur Hippursäurebildung. Zeitschrift für physiologische Chemie, 1887, II, 485.

The author found no increase of hippuric acid elimination after feeding tyrosin to man.

M. KUMAGAWA. Über die Wirkung einiger antipyretischer Mittel auf den Eiweissumsatz im Organismus. Virchow's Archiv für pathologische Anatomie, 1888, CXIII, 134.

Metabolism experiments on dogs. An animal weighing 15 kilograms and in nitrogen equilibrium received sodium benzoate dissolved in warm water with the food as follows: First 3 days—3 grams; following 8 days—5 grams; in 11 days—41.54 grams of pure benzoic acid were given without ill effects. There was an increase of nitrogen excretion in the urine. In the last days the indican reaction was weaker. Forty per cent of the benzoic acid of the whole period was excreted as hippuric acid; 55 per cent as benzoic acid.

A dog weighing 36 kilograms and in nitrogen equilibrium received 24 grams of benzoic acid mixed in food, within 6 days; increased protein decomposition was observed. During the last days and in the after period the indican reaction was distinctly diminished, but never completely missed. The ethereal sulphates were also diminished about 20 per cent. The number of bacteria in the feces had decreased. The author concludes that benzoic acid manifests antiseptic properties in the intestines.

MOERNER. Eine Vergiftung durch Natrium benzoicum. Centralblatt für die medizinische Wissenschaften, 1888, XXVI, 545.

More than 100 grams of sodium benzoate and a little naphthalin had been introduced into a dermoid cyst of the ovary. About 30 hours later the signs of intoxication arose and the cyst was washed out. The urine contained a considerable amount of hippuric acid (1.9 grams per 100 c. c.) and gave no reduction test and no albumen. No free benzoic acid was found. In urine voided 2 days later no hippuric acid was found.

R. COHN. Über das Auftreten von Benzamid, etc. Zeitschrift für physiologische Chemie, 1890, XIV, 202.

In dogs fed on ammonium benzoate by far the greater part is excreted as hippuric acid, with very little benzamid.

C. BINZ. Vorlesungen über Pharmakologie, zweite Auflage, 1891. Berlin, Hirschwald. p. 594.

A discussion of the basis for benzoic acid therapy. Disadvantages: 6 to 8 grams of benzoic acid or sodium benzoate cause irritation of the stomach and intestine.

R. COHN. Über das Auftreten, etc. Zeitschrift für physiologische Chemie, 1892, XVII, 310.

In rabbits and dogs benzaldehyde caused the appearance of free benzoic acid and hippuric acid, and perhaps a trace of cinnamic acid in the urine. Cinnamic acid is mostly transformed to hippuric acid.

VOGL. Realencyclopädie der gesammten Heilkunde (Eulenburg). 3 Auflage. Leipzig, 1894, III, 229.

Author reports that Schreiber took 15 grams of benzoic acid in divided doses in 2 days. The only symptoms experienced were tickling in the throat, feeling of warmth in the abdomen, and later in the whole body, and increased frequency of pulse. Next day abundant perspiration set in, increased expiration with dullness in the head, and slight transitory digestive disturbances. Author recommends 0.03 to 0.5 gram per dose as expectorant; for rheumatism, 0.5 to 1 gram every hour or every 3 hours (10 to 12 grams per day). Doses up to 25 grams of sodium benzoate per day are recommended for various conditions.

VON JAKSCH. Die Vergiftungen. Specielle Pathologie und Therapie (Nothnagel), Vienna, 1897, I, 357.

Author remarks that perhaps benzoic acid and its salts are the least injurious of the whole aromatic series for the human organism; he repeatedly gave in rheumatism as high as 24 grams of sodium benzoate per dose without observing toxic effect. Cases are known where up to 60 grams per day were given. The free benzoic acid will act toxic simply as acid.

SIRECI. Über die Ausscheidung der Hippursäure. Maly's Jahresbericht für Thierchemie, 1897, XXVII, 325.

Even on a uniform diet the daily hippuric acid excretion in the same individual varies widely. Hippuric acid given internally is completely excreted as such. Even with high doses of benzoic acid it was not possible to exceed the capacity of the organism to transform all the benzoic acid to hippuric acid.

SIRECI. Sulla eliminazione dell' acido hippurica. Gazetta degli Espedali e delle cliniche, 1896, XVII, 496.

Doses of benzoic acid ranging from 1 to 15 grams per day are given without noting ill effects.

WEHMER. Einige vergleichende Versuche über das antiseptische Verhalten der Benzoësäure, etc. Chemiker Zeitung, 1897, XXI, 73; Chemisches Centralblatt, 1897, I, 548.

In concentration of 0.1 per cent benzoic acid inhibited the growth of yeast.

PFEIFFER and EBER (in Verbindungen mit GÖTZE und MÜLLER). Beitrag zur Frage über die Bildung der Hippursäure im tierischen Organismus. Die Landwirtschaftliche Versuchstationen, 1898, XLIX, 97–144.

Protein decomposition can not be the only source of the nitrogen-free component of hippuric acid, according to experiments on the horse.

J. POHL. Über Synthesenhemmung durch Diamine. Archiv für experimentelle Pathologie und Pharmacologie, 1898, XLI, 97.

By feeding ethylendiamin to rabbits, hippuric acid synthesis, after introduction of benzoic acid, can be markedly inhibited without any disturbance of absorption or excretion of the benzoic acid.

WIENER. Über das Glykokoll als intermediäres Stoffwechselproduct. Archiv für experimentelle Pathologie und Pharmacologie, 1898, XL, 313.

In rabbits fed with sodium benzoate it takes 4 days until all of the benzoic acid reappears in the urine, free or combined. Benzoic acid in doses of 1.7 grams per kilogram is fatal to rabbits. The values for the combined benzoic acid output are very constant, the maximum being reached with 1 gram of the acid per kilogram. When small amounts of benzoic acid are given, all of it reappears in the urine; with the large doses a constant loss occurs. Feeding of benzoic acid does not decrease the urea output. There is increase of protein decomposition, so that the total nitrogen and urea outputs are increased. When glycocoll is injected subcutaneously and benzoic acid is given per os in a fatal dose, the animal survives. Other amido acids detoxified benzoic acid similarly. The author assumes that they are transformed to glycocoll.

KUNKEL. Handbuch der Toxikologie. Jena, G. Fischer, 1898, p. 550.

(1) The free benzoic acid, soluble in about 400 parts of water, when applied in powder form, has a strongly irritating action on mucous membranes, leading to strong local inflammations. Even with not very high doses, hemorrhages in the mucous membranes have been seen.

(2) Sodium benzoate appears to be very little toxic. In its application in cases of tuberculosis, doses up to 50 grams pro die were given to single individuals without ill effect, but not without action. Excessive doses cause nausea, vomiting, dullness, humming of ears, and difficulty in hearing. These symptoms disappear when the medication is stopped.

K. Spiro. Über Nachweis und Vorkommen des Glykokolls. Zeitschrift für physiologische Chemie, 1899, XXVIII, 174.

Author obtained no synthesis of hippuric acid from benzoic acid and glycocoll with tissue press juice, and thinks that surviving cells are necessary.

H. Leffmann. Digestive ferments, with especial reference to the effect of food preservatives. Journal of the Franklin Institute, 1899, CXLVII, 97.

Benzoic acid and sodium benzoate are practically without influence on the digestive power of the enzymes studied (diastases, carase, pancreatic extracts), excepting higher concentrations. The author adds that as the preservative influence of sodium benzoate is undoubted and its disagreeable taste in any food article will prevent its liberal use it seems well adapted for general use.

Salkowski. Über die antiseptische Wirkung von Salicylaldehyd und Benzoësäureanhydrid. Virchow's Archiv für pathologische Anatomie, 1899, CLVII, 416.

In concentration of 0.5 per cent benzoic acid anhydrid kept chopped meat mixture sterile more than 5 months; similarly 0.25 per cent. With 0.1 per cent a few colonies were grown after this time, while with 0.025 per cent the mixture showed cultures after 5 days.

Ashhurst. Certain effects of benzoic acid upon the urine. Philadelphia Medical Journal, Feb. 24, 1900.

In dogs 1 to 2 grams of sodium benzoate administered subcutaneously for several days produced slight and inconstant diuretic effect. A dog received 1 gram of sodium benzoate daily during 2 months. No ill effects are mentioned. The author took 6 grams of sodium benzoate daily during 6 days. The quantity of urine was somewhat increased, the specific gravity slightly altered, the acidity slightly diminished.

Blumenthal. Zur Methode der Hippursäurebestimmung. Zeitschrift für klinische Medizin, 1900, XL, 339.

M. Lewandowsky. Versuche über den Einfluss der Benzoësäure auf die Harnsäurebildung. Zeitschrift für klinische Medizin, 1900, XL, 202.

A patient received 35 grams of sodium benzoate in 5 days; 15.5 grams were excreted as hippuric acid. There was no decrease of uric acid. This indicates that the formation of hippuric and uric acids are independent of each other. Three patients were fed with sodium benzoate for 2 to 7 days, and doses between 5 and 9 grams per day. In two cases a peculiar sleep-producing action of benzoic acid was noted.

Abelous and Ribaut. Sur l'existence d'un ferment soluble operant la synthèse de l'acide hippurique aux dépens du glycocolle et de l'acide benzoique. Comptes Rendus de la Société de Biologie, June 9, 1900.

The hippuric acid synthesis by kidney tissue is due to an enzyme action.

Weintraud. Über den Abbau des Nucleins im Stoffwechsel. Centralblatt für innere Medizin, 1900, XXI, 464.

An occasional increase of hippuric acid excretion after thymus feeding is due to increased intestinal putrefaction which furnishes the benzoic acid radical.

Parker and Lusk. On the maximum production of hippuric acid in rabbits. American Journal of Physiology, 1900, III, 472.

In fasting rabbits toxic symptoms and death resulted when 1 to 0.4 gram of benzoic acid as lithium salt was given for 6 days. In fasting rabbits frequently fed with lithium benzoate the amount of glycocoll eliminated as hippuric acid compared with the total nitrogen output indicates that in metabolism the protein molecule may yield glycocoll to the extent of at least 3 to 4 per cent.

E. Curtis. Benzoic acid and Benzoates. Reference Handbook of the Medical Sciences, 1900, Vol. I.

In discussing dosage the author states that a serious derangement is scarcely possible by any likely doses of benzoic acid, intentional or accidental. In urinary disorders benzoic acid may be given several times daily in doses from 0.65 to 2 grams. Sodium benzoate has been given internally in doses amounting to 5 to 20 grams a day without serious derangement, and for pronounced therapeutic effect in rheumatism the fullest limit may be necessary. Physiologically sodium benzoate is about as harmless as a salt can be.

R. Cohn. Über den Glykokollvorrat des tierischen Organismus. Festschrift für M. Jaffé, Braunschweig, 1900 or 1901, p. 319.

Feeding with proteins, and protein decomposition products which yield glycocoll, counteracts the toxic effect of benzoic acid in rabbits.

H. Ulrici. Über pharmakologische Beeinflussung der Harnsäureausscheidung. Archiv für experimentelle Pathologie und Pharmacologie, 1901, XLVI, 321.

The author took 8 grams of sodium benzoate daily for 3 days. There was insignificant, if any, decrease of nitrogen metabolism, which the author thinks is due to the inhibiting influence of the benzoic acid on the intestinal putrefaction, so that less nitrogen is absorbed. Phosphoric acid excretion was not influenced.

Berninzone. Sulla sintesi fisiologica dell' acido ippurico. Boll. d. R. Accad. med. di Genova, 1901, 16, No. VI, 47.

Kidney enzymes of the pig and horse form hippuric acid from benzaldehyde or benzalcohol and glycocoll.

K. Siebert. Über die nach Benzaldehyd und Benzoësäuredarreichung im Harn auftretenden reducierenden Stoffe. Inaugural Dissertation, Königsberg, 1901.

Author suggests that the reducing substance found in the urine after feeding dogs and rabbits with sodium benzoate is a paired glycuronate; he failed to find the conjugating substance after feeding large doses of sodium benzoate.

C. Lewin. Beiträge zum Hippursäurestoffwechsel des Menschen. Zeitschrift für klinische Medizin, 1901, XLII, 371.

An attempt to refer hippuric acid excretion in man under normal conditions mostly to intestinal putrefactive changes.

Report of the Departmental Committee appointed to inquire into the Use of Preservatives and Coloring Matters in the Preservation and Coloring of Food (together with minutes of evidence, appendix, and index). London, 1901.

Personal testimony regarding the use of benzoic acid and benzoates. Hutchinson testifies that in 5 to 10 grain doses he found it extremely irritating to the empty stomach, but that it never produced vomiting. It is frequently prescribed for septic conditions of the urine.

Weitzel. Über die Labgerinnung der Kuhmilch unter dem Einfluss von Borpräparaten und anderen chemischen Stoffen. Arbeiten aus dem Kaiserlichen Gesundheitsamt, 1902, XIX, 126.

A concentration of 0.0288 per mille of sodium benzoate marks the beginning of distinct inhibition of the rennin coagulation of milk. The limit of distinct coagulation occurs with 1.44 per cent of sodium benzoate. Benzoic acid in concentrations under 0.6 per cent has an accelerating influence on the rennin coagulation.

Rem-Picci. Über eine neue Methode für die Bestimmung der Hippursäure im Menschenharn. Maly's Jahresbericht für Thierchemie, 1902, XXXII, 316, (From Archivio di farmac. speriment e scienze affini, 1902, I, 7.)

Method of estimating hippuric acid in urine.

R. Cohn. Zur Frage der Glykokollbildung aus Leucin im tierischen Organismus. Archiv für experimentelle Pathologie und Pharmacologie, 1902, XLVIII, 177.

Leucin failed to detoxify benzoic acid in feeding experiments with rabbits.

E. Bashford and W. Cramer. Über die Synthese der Hippursäure im Tierkörper. (Preliminary Report.) Zeitschrift für physiologische Chemie, 1902, XXXV, 324.

The formation of hippuric acid is not dependent on intact and living kidney cells.

F Soetbeer. Kontrolle der Blumenthalschen Methode der Hippursäurebestimmung. Zeitschrift für physiologische Chemie, 1902, XXXV, 536.

Critique of Blumenthal's method and of Lewin's results.

Salkowski. Über die Stoffwechselwirkung der Benzoësäure, etc. Internationale Beiträge zur innere Medizin. Festschrift für v. Leyden, Berlin, 1902, II, 27.

The author concludes that benzoic acid and its derivatives which are transformed to benzoic acid have no constant effect on protein decomposition. The effect is dependent on the individuality of the animal besides the state of nutrition.

Hupfer. Einwirkung von Chinasäure auf Harnsäure und Hippursäure ausscheidung. Zeitschrift für physiologische Chemie, 1902–1903, XXXVII, 302.

Quinic acid (20 grams per day) on 3 days increased the output of hippuric acid.

A. Kanger. Zur Frage über die chem. Zusammensetzung und die pharmakologische Wirkung der Preisselbeere (*Vaccinium vitis idaea* L.). Archiv für experimentelle Pathologie und Pharmacologie, 1903, L, 46.

Author states benzoic acid can easily be demonstrated in food. Fresh berries contained 0.0676 per cent of benzoic acid; dry substance, 0.451 per cent.

Rem-Picci. Über die Umwandlung der Benzoësäure in Hippursäure bei Nierenkranken. (Bollettino della R. Accademia Medica de Roma, XXX, 1–21.) Maly's Jahresbericht für Thierchemie, 1903, XXXIII, 102.

Author concludes that after subcutaneous injection of benzoic acid in individuals with intact kidneys the increased excretion of hippuric acid is much less than would correspond to the introduced benzoic acid. In three cases of nephritis a much larger output of hippuric acid was observed under similar conditions.

Pfeiffer, Bloch, and Riecke. Eine neue Methode zur Bestimmung der Hippursäure. Mitteilungen des landwirtschaftlichen Instituts der Universität Breslau, 1903, II, 273.

Method of estimating hippuric acid.

Mosse and Neuberg. Über den physiologischen Abbau von Jodalbuminen. Zeitschrift für physiologische Chemie, 1903, XXXVII, 427.

The urine of rabbits fed with iodated ovalbumin contained o-iodo-hippuric acid.

R. Kobert. Lehrbuch der Intoxikationen. II. Band. Spezieller Teil. I. Hälfte, p. 115. Stuttgart, Ferdinand Enke, 1904.

Author concludes that protein metabolism is not always increased after doses of benzoic acid or its salts. Some individuals can tolerate doses of more than 10 grams of sodium benzoate internally, while sensitive patients respond with vomiting and nausea, vertigo, humming of the ears, etc. The greater part of the benzoic acid appears in the urine as hippuric acid. If larger doses are given the urine contains post-mortem a third compound, most probably a paired glycuronate.

E. Pribram. Zur Lehre von den physiologischen Wirkungen carbocyclischer-Säuren. Archiv für experimentelle Pathologie und Pharmacologie, 1904, LI, 372.

Sodium benzoate and sodium hippurate possess diuretic action resulting in increased nitrogen excretion in the urine of rabbits.

Gerhardt. Über Darmfäulniss. Ergebnisse der Physiologie, 1904, III, 138.

Hippuric acid is doubtless partly derived from the absorption of putrefactive products of tyrosin and phenylalanin.

Blumenthal and Braunstein. Über die quantitative Hippursäurebestimmung beim Menschen. Hofmeister's Beiträge zur chemischen Physiologie, 1904, III, 385.

Knoop. Der Abbau aromatischer Fettsäuren im Tierkörper. Hofmeister's Beiträge zur chemischen Physiologie, 1904, VI, 150.

An experimental study of the aromatic acids which yield hippuric acid in the body.

Pfeiffer, Riecke, and Bloch. Die Muttersubstanzen der im Organismus der Pflanzenfresser erzeugten Hippursäure. Mitteilungen des landwirtschaftlichen Instituts der Universität Breslau, 1904, II, 695–728.

Experiments with rams; an attempt to find the precursor of hippuric acid in the fodder of herbivorous animals.

R. Cohn. Zur Frage der Glykokollbildung im tierischen Organismus. Archiv für experimentelle Pathologie und Pharmacologie, 1905, LIII, 435.

Ammonium acetate detoxifies the fatal dose of benzoic acid, but less effectively than glycocoll.

Magnus-Levy. Über die Herkunft des Glykokolls in der Hippursäure. Vorläufige Mittheilung. Münchener medizinische Wochenschrift, 1905, LII, 2168.

Author concludes from experiments on rabbits and sheep that the vital decomposition of protein furnishes much more glycocoll than the hydrolytic decomposition in vitro.

H. C. Wood. Therapeutics. Principles and Practice. 12th edition. Philadelphia, 1905, p. 859.

Author states that the local action of benzoic acid, unless in large quantities, is scarcely irritant to mucous membranes, on which, however, it exerts a distinct alterative influence. The general systemic effect is very slight and the largest therapeutic doses never produce any symptoms unless they are those of slight gastric irritation. The contradictory testimony regarding the influence upon nutrition indicates that it has no constant powerful action. Doses: 0.62 gram benzoic acid; 1.3 to 3 grams of sodium benzoate.

G. Astolfoni. Recherches concernant l'action de quelques substances diuretiques sur la synthèse de l'acide hippurique. (Résumé de l'auteur.) Archives italiennes de biologie, 1905, XLIII, 373.

Caffeine (dog), lactose (rabbit), and calomel (rabbit) increase the hippuric acid synthesis after the introduction of sodium benzoate.

G. Astolfoni. Recerche interno all' azione di alcune sostanze diuretiche sulla sintesi dell' acido ippurico. Rivista veneta di Scienze med., 1905, XLII, 57.

G. Astolfoni. Recerche interno all' azione di alcune sostanze sulla sintesi dell' acido ippurico. Archives internat. de pharmacodynamie et de therapie, 1905, XIV, 39.

R. Heinz. Handbuch der experimentellen Pathologie und Pharmakologie, I. G. Fischer, Jena, 1905.

Data on the antiseptic power of benzoic acid.

McGill. Report on Preservatives. Laboratory of the Inland Revenue Department. Ottawa, Canada. June, 1905. Government Printing Bureau, Ottawa, 1905.

Review of the opinions of others concerning benzoate of soda, etc.

J. Schmid. Über die quantitative Hippursäurebestimmung nach Pfeiffer, etc. Centralblatt für innere Medizin, 1905, XXVI, 81.

A patient with dystrophia muscularis, receiving 6 grams sodium benzoate, later 0.5 gram, later twice 0.5 gram per day, excreted 50 per cent of the introduced benzoic acid as hippuric acid or benzoic acid.

Pinchas Feigin. Über die Hippursäureausscheidung beim hungernden Menschen. Inaugural Dissertation, Berlin, 1906.

Benzoic acid introduced in starving man is for the most part not excreted as free benzoic or hippuric acid, but probably as benzoylglycuronic acid.

A. Behre and A. Segin. Über die Wirkung der Konservierungsmittel. Zeitschrift für Untersuchung der Nahrungs- und Genussmittel, 1906, XII, 461.

Benzoic acid is one of the best preservatives for meat.

W. Wiechowski. Die Gesetze der Hippursäuresynthese. (Zugleich ein Beitrag zur Frage der Stellung des Glykokolls im Stoffwechsel.) Hofmeister's Beiträge zur chemischen Physiologie, 1906, VII, 204–275.

In rabbits the fatal dose of benzoic acid is about 1.7 grams per kilogram. Diarrhea next to diuresis and increase of metabolism is one of the first signs of intoxication. The benzoic acid may be excreted with the diarrheal stool. The author's experiments indicate that benzoic acid causes considerable increase of nitrogen excretion in rabbits, but not always within the first 24 hours. In rabbits hippuric acid acts like benzoic acid on metabolism. It is not harmless. Like benzoic acid it has a diuretic action and an influence on peristalsis. The total excretion of benzoic acid is not always quantitative. The loss is not constant. As a rule rabbits excrete free benzoic acid besides hippuric acid, even when small doses of benzoic acid are given, and even if glycocoll is given in amounts more than sufficient to combine with the benzoic acid. There exists no direct relation between hippuric acid synthesis and the degree of protein metabolism. Individual variations determine the extent of synthesis in the rabbit.

Abderhalden and Teruuchi. Studien über die proteolytische Wirkung, etc. Zeitschrift für physiologische Chemie, 1906, XLIX, 1.

The active press juice of dog's kidney can not decompose hippuric acid.

Brugsch and Hirsch. Hippursäuresynthese und Ausscheidung der Benzoësäure beim Hunde. Zeitschrift für experimentelle Pathologie und Therapie, 1906, III, 663.

The degree of hippuric acid synthesis after introduction of benzoic acid is much lower in carnivorous than in herbivorous animals. The amount of free benzoic acid in the urine is much greater than the amount of benzoic acid paired with glycocoll. It is not possible to produce a considerable excretion of glycocoll in the dog by giving larger doses of benzoic acid, 0.8 to 1 gram per kilogram. The detoxification of benzoic acid in the dog occurs only in small part by hippuric acid formation, but mostly by formation of reducing substance. A not inconsiderable part leaves the organism as free benzoic acid. In starving dogs the benzoic acid caused a distinct increase in nitrogen metabolism and had a diuretic effect.

B. von Fenyvesey. Über den Einfluss experimentell erzeugter Krankheits-processe auf biochemische Synthesen. Maly's Jahresbericht für Thierchemie, 1906, XXXVI, 633. (Original in Hungarian.)

The synthesis of hippuric acid is considerably diminished in rabbits poisoned with bacterial toxins.

F. Galdi. Contributo alla studio dell' acido ippurico nell' organismo umano. Il Policlinico, Sez. med., 1907, No. 6. [Abstract in Zentralblatt für die gesammte Physiologie und Pathologie des Stoffwechsels, 1907, II, 748.]

Author reports experiments to show that part of the hippuric acid may be synthetized in the intestine.

Magnus-Levy. Über das Auftreten einer Benzoësäure-Glycuronsäure Verbindung im Hammelharn nach Benzoësäure Fütterung. Biochemische Zeitschrift, 1907, VI, 502.

Benzoylglycuronic acid is excreted after giving benzoic acid to dogs, rabbits, rams, and men. As much as 20 per cent of the introduced benzoic acid may appear in this form.

Magnus-Levy. Über die Neubildung von Glycocoll, etc. Biochemische Zeitschrift, 1907, VI, 523.

In the body more glycocoll can be produced than exists preformed in the protein decomposed. There was a definite increase in protein decomposition after larger doses of benzoic acid in a starving ram.

S. Amberg and A. Loevenhart. Further observations, etc. Journal of Biological Chemistry, 1908, IV, 149.

Sodium benzoate in concentration of 1 per cent does not inhibit the lipolytic action of clear liver extract on ethylbutyrate.

Lewinski. Über die Grenzen der Hippursäurebildung beim Menschen. Archiv für experimentelle Pathologie und Pharmacologie, 1908, LVIII, 397.

A man weighing 59 kilograms took 12 grams of benzoic acid as sodium benzoate in 12 hours on a mixed diet. He excreted no free benzoic acid and the urine contained no reducing substance. The benzoic acid was all excreted in combination. A man of 67 kilograms body weight took 20 grams of benzoic acid in 12 hours without ill effects. There was no free benzoic acid or reducing substance in the urine; but after an intake of 25 grams of benzoic acid without ill effects, 1.6 grams of free benzoic acid were excreted. When the same individual took in 8 hours 40 grams of benzoic acid in one-half hour doses, there was nausea and headache; 26 per cent of the introduced benzoic acid was excreted as free benzoic acid. The urine reduced strongly and was dextrorotatory. With a diet rich in proteins, particularly gelatine, 40 grams of benzoic acid produced no ill effects; 10 per cent of the introduced acid was excreted as free benzoic acid. The urine reduced slightly and showed slight dextro-rotation. Similarly 50 grams of benzoic acid showed no ill effects. Sixteen per cent reappeared as free benzoic acid and there was slight reduction, etc., in the urine. The author concludes that a person taking a diet rich in proteins can transform more benzoic acid to hippuric acid. The appearance of reducing substance in the urine is an expression of the impoverishment of the organism in glycocoll. In certain forms of nephritis there was a retarded elimination after ingestion of benzoic acid. In one individual 40 grams of benzoic acid and 25 grams both caused increase of nitrogen excretion. In a man of 71 kilograms on a diet poor in proteins, 30 grams of benzoic acid caused increase of nitrogen excretion and diminished uric acid output.

Seo. Über die Hippursäurespaltung durch Bacterien, etc. Archiv für experimentelle Pathologie und Pharmacologie, 1908, LVIII, 440.

Hippuric acid may readily be decomposed by bacterial action in the urine, especially when the reaction is alkaline. This may explain the conflicting results of investigators.

H. W. Wiley, with the collaboration of W. D. Bigelow, F. C. Weber, and others. Influence of Food Preservatives and Artificial Colors on Digestion and Health. IV. Benzoic Acid and Benzoates. United States Department of Agriculture, Bureau of Chemistry. Bulletin No. 84, Part IV, 1043–1294, 1908.

Benzoic acid and benzoate of sodium were administered in capsules in doses of 0.9 to 2.5 grams daily to healthy young men (18 in all) during successive periods of several days. The longest single period was 20 days. During one period of 10 days, doses of 1 to 1½ grams were given. The authors state that marked symptoms of discomfort and malaise were produced in the majority of cases without reference to the form in which the preservative was administered; most common symptoms were nausea and headache. The nausea resulted in vomiting in three cases. Seven

subjects complained of weakness and also of burning and irritating sensations in the esophagus; hunger was increased in three cases, and indigestion was especially noted five times. The authors assume different degrees of toleration of the substance in different individuals. A loss of weight amounting to from 0.22 kilogram to 0.46 kilogram was noted. This continued in the after period. In the original experiment the total benzoic acid recovered (as hippuric acid and as benzoic acid) amounted in the case of those receiving benzoic acid to 81 per cent of the total quantity ingested; and for those receiving sodium benzoate, to 61 per cent. In the supplemental experiment 93 per cent of the amount ingested as benzoic acid was recovered as hippuric acid, while for those receiving benzoate of soda 72 per cent was recovered. In the first series considerable benzoic acid was recovered as such from the urine. In subsequent series where the analyses were made on daily samples instead of on composites, it was mostly recovered as hippuric acid. The data on the feces are not sufficiently marked to demonstrate a distinct effect produced by the preservative. There was no diuretic effect, but an increase of the total solids excreted in the urine. A microscopic examination of the urine indicated an increase in the presence of microscopic bodies—epithelial cells, mucous strands, and mucous cylindroids—during the preservative period exemplified by the following comparative numbers for the fore, preservative, and after periods: 64, 75, 59. No significance was attached to the blood examination. While the average data did not show any marked disturbance of the nitrogen metabolism, there is a tendency to decrease the nitrogen balance. In one experiment there was an increase of 2 per cent in the preservative period of the amount of ingested nitrogen excreted in the metabolized form. The authors report indications of a tendency of the preservatives to increase the percentage of phosphoric acid excreted in the feces, and of sulphur in the feces and urine. From their data the authors conclude that either preservative "is highly objectionable and produces a very serious disturbance of the metabolic functions, attended with injury to digestion and health," such as "grave disturbances of digestion" and "distinct loss of weight." "The influence of the benzoic acid and benzoate of soda upon metabolism was never of a character indicative of a favorable change therein. While often the metabolic changes were not strongly marked, such changes as were established were of an injurious nature." "Benzoic acid and benzoate of soda are bodies which when added to foods are injurious to health."

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